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CANADA

MEDICAL AND SURGICAL JOURNAL.

A

Monthly Record

OF

MEDICAL AND SURGICAL SCIENCE.

EDITED BY

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CANADA

MEDICAL & SURGICAL JOURNAL

Original Communications.

THE INCREASE OF INSANITY—WHAT IS THE CAUSE?

By HENRY HOWARD, M.D., M.R.C.S., ENG.,

Medical Superintendent Longue Pointe Lunatic Asylum.

(Read before the Medico-Chirurgical Society of Montreal June 2nd, 1876.)

MR. PRESIDENT AND GENTLEMEN :—The subject that I wish to bring before the Society this evening, for their consideration, is one deserving our serious attention. It is a subject so obscure and clouded, that if we can get the slightest ray of light upon it, our time will not be misspent.

I propose that we should try and give a reasonable scientific answer to the oft-repeated question: what is the cause of the great increase of insanity throughout the civilized world? I say the civilized world, for we have no statistics at all to show that such a malady exists amongst the savage races, and from what we do hear, it does not.

We will not stop to discuss the question, is there an increase of insanity, for if statistics from the most authentic sources be worth anything, that is an established fact.

You are aware that many well meaning people seeing the great evil to society from intemperance, have endeavoured to prove that intemperance was the cause of the increase of insanity, but they have failed to establish that there is an increase of

intemperance. The contrary is the fact, as Government statistics from Great Britain, France and the United States prove, and every man of experience knows that if intemperance was the cause of insanity, great as has been its increase, we would have more insane persons than we have already. It is said, with what truth I do not know, that of the hundred million people on this globe, three millions go drunk to bed every night. I think myself this is an exaggeration, but we know that it is a sad fact, that thousands who have never gone mad, go to bed drunk every night.

We must not be led astray by those fanatical letter-writer that make these broad statements, nor by temperance preachers, no matter who they be ; we must be guided by scientific truth in our research. I am very sorry to say that too frequently the reports of medical superintendents of Lunatic Asylums have led many astray in this particular, but as a rule medical superintendents are not to blame ; they enter upon their admission book what they find entered upon the form presented to them by the friends of the insane person, and these friends are generally incapable of judging of the supposed exciting cause, and frequently mistake the first symptom of insanity for the cause. For example, a man that has been temperate all his life suddenly becomes intemperate. A hysterical girl suddenly becomes very devout and religious, both are simply the first symptoms of insanity, and we are told that drink is the cause in one and religion in the other. I recently admitted a case of hysterical mania, and on the order for admission it was gravely stated that the cause of insanity was that the girl was too happy, because, poor girl a few hours before she became a raving maniac,—she had told her mother that she was so happy, she feared she would go mad. Of course these answers to a question are simply meaningless, and of no practical benefit whatever to the medical attendant of an insane hospital. Indeed we seldom get any information that is of any practical use to us whatever. Like the medical men of general hospitals, we have our case before us and must diagnose what it is, without much assistance from others.

From sixteen years experience of the treatment of the insane, I can positively affirm that the number of inebriates were a very small minority, and of 210 treatable cases admitted into the insane hospital at Longue Pointe since August, 1875, I find there were but 29 even accused of being drunkards. Mind, I am fully prepared to admit that drunkenness, where it produces misery and suffering, may act indirectly as an exciting cause of insanity, and I am perfectly alive to the fact, that the poisons by which intoxicating liquors are adulterated, very often produce blood poison and consequent nerve poison and nerve suffering, but this is not to the point; I deny that drunkenness is a cause of insanity. So much for what is not the cause of the increase of insanity, and which I considered it my duty to lay before this society.

According to my views founded upon the writings of others and my own experience, there are two causes for the increase of insanity, the remote, and the immediate. The remote, that it is a hereditary disease, the immediate is summed up in one word, *suffering*.

If the theory of the best scientists in the world be correct, that insanity is as much a hereditary disease, as is phthisis, cancer, or gout, and that no man can go mad from any cause unless there is in him an insane neurosis, it follows as a natural consequence, of this heredity, that there must be more persons now with an insane neurosis than there were one hundred years ago, unless it be that these hereditary diseases die out and become extinct by time and circumstances. For my own part I do not believe that they do die out, and I have never seen any proof that they do. I believe that that which once exists, is, and can never be destroyed, though in the cases of hereditary taint, it may be modified by time and marriage; but then an insane neurosis, or any hereditary disease, has just as good a chance of being increased by marriage as it has of being diminished, for the hereditary taint may be on both sides of the house.

When we remember what procreation is, and that like begets like, we will find it as easy to recognize that the hereditary

mental organization is as transmissible for centuries through generations, as are family likenesses, and the latter we know to be a fact.

Accepting this view of the question, we can suppose a man born one hundred years ago with an insane neurosis, there could, at the present time, be two hundred people the offspring of that man, each of them having the hereditary taint, here there would be a fearful increase of the remote cause of insanity. But when we come to consider how many men existed one hundred years ago, with an insane neurosis, we have to come to the fearful conclusion that there are but few in the present day, who have not in them the hereditary insane neurosis. I say it is a fearful conclusion to come to, nevertheless if it be true it is better we should recognize it, and guard, as far as it is possible, against the exciting cause, which develops the latent malady.

In every hereditary disease there must be an exciting cause to develop the malady, a man may be the subject of latent phthisis, and never know it, not even his medical man may suspect it, till he gets an attack of bronchitis or pneumonia, when phthisis will develop itself. A man may be the subject of gout, and never know it till some ordinary disease reduces his system below par, and gout, for the first time, develops itself. A man may have latent cancer in his system, and never know it, till some of his glands receive a physical injury, when the cancer will develop itself. So likewise, a man may have in him an insane neurosis, and neither himself, no any one else, be the wiser of it, till it is developed by its own peculiar exciting cause, and my theory is that the exciting cause that develops insanity is *suffering*, and I call suffering anything, no matter what it is, even though pleasurable to the person, like excessive venery, that diminishes vital power, or nervous force, and all physical suffering does diminish vital power or nervous force.

We are accustomed to make no distinction between what we call mental and physical suffering, but holding, as I do, that mind and body are one, I call all suffering physical suffering. I therefore hold that no matter what the form of insanity that

presents itself may be, whether it be from anæmia of the brain, hyperæmia, paralysis, or diminution of activity in the cerebral cells themselves, there must have preceded it, *suffering* in some form or other, which diminished vital power or nervous force, in the person, and from my own observation, I say that the form of suffering that most successfully destroys or diminishes vital power or nervous force, is what is understood as mental suffering, more particularly where the sufferer makes powerful efforts to conceal his suffering from the eyes of the world. Mind you that I fully recognize the fact and act upon it every day, of the important part that other organs, such as the lungs, heart, liver, digestive, urinary and genital organs take in cases of insanity, but instead of working upon disease of any of those organs as the primary cause, I conceive that these organs themselves suffer in common with the mental organization, from that which produced the diminished vital power or nervous force ; in other words that these organs themselves, only became diseased, after there had been diminished vital power or nervous force, but it does not follow that the suffering which developed the latent insanity, should of necessity produce a disordered state of any of these organs, although if there was a latent hereditary disease in any of these organs, such as phthisis, or gout, I think, the same suffering would be very likely to develop it, and I am led to this conclusion from the fact, that the majority of female lunatics who run into dementia generally die of phthisis ; on the other hand the majority of male lunatics who die in a state of dementia, die of renal affections and paralysis.

For the foregoing reasons I conclude that the cause of the increase of insanity is due to its being a hereditary disease, and that when latent it is developed by suffering, and that the suffering which develops it most successfully is what we understand as mental suffering, and I hold that mental suffering has been, and is, on the increase, and consequently is the cause of the increase of insanity. I should hardly think it necessary to prove to this society that mental suffering has increased, or that there has been a cause for increase within the last half century,

but it is necessary I should do so to make my reasoning conclusive.

I will only take two causes, though I might take many more. Two causes have arisen within the last half century to increase mental suffering, although, in themselves they have been a great blessing to the whole human race; but like every good thing they have their reverse side, and that side is dark and shadowy. I speak of emigration and education. So great have been the facilities offered for emigration within the last half century, that there is no country that has not sent forth thousands upon thousands of her people, to some promised land. Now it is impossible to conceive any human being leaving the land of his nativity, his parents, the home of his childhood, and his numerous friends,and for him not to suffer, and suffer acutely. Then he has his suffering when for the first time, he lands upon a foreign shore, amongst strangers, perhaps amongst a people who do not understand his language; then there is his first years suffering to earn wherewithal by which he may provide food and raiment; then, there is the large majority who never succeed in doing better than they would have done at home, then there is the small minority that succeed; but they find their promised land not to be all they expected, then in their old age, memory of the past, of the old home comes back to them and they, with all the others, suffer. And our insane hospitals contain insane of all nations, and one of their everlasting cries is, my own country, my own home. Yes, the self-expatriated always suffers more or less, no matter how successful he may be, memory of the past gives him suffering. Then see the suffering of those friends that remain behind. Their suffering is a living sorrow that clings to them till death; for they are always hoping against hope. I have said that emigration was a great blessing, but like any other substance it has its shadow, and that shadow is that it has been and is the cause of great mental suffering, and mental suffering unknown to our forefathers. Secondly there is *education*. No man in his senses will deny the blessing of education, but the facility of obtaining it within the last half century has no doubt been a cause of great suffering. The

labouring man, the tradesman, mechanic and small farmer can have their children as well educated as can the most wealthy of our citizens and that without any expense, and of course this is and has been a great blessing at least to some; that is to a very small minority, for certainly not more than one out of ten is a success in life, and it becomes a cause of suffering to nine-tenths. The children of these men after having been educated will never return to the calling of their fathers, and it would be hard to expect they would, at least in some cases. For example, we can hardly expect the labourer's son to go and earn his bread as a labourer after that he has been educated, but we might well expect the sons of artizans, mechanics and farmers to return to the calling of their fathers, and by virtue of their education to raise the standard of their calling, but do they do so? They do not, and why? Because they are not educated for their different callings, they are all educated with the idea that they must be professional men, or mercantile men. Time comes and too late they find that while they were running after a shadow, they lost the substance; they find the professions so crowded, that to drag out a miserable existence they must be perfect slaves, and, as I said before, not one out of ten of them succeed; it is one thing to bear a professional title, it is another to be a successful professional man; they destroy themselves, and, by their competition, injure their confreres, without serving themselves. No doubt but that they have made a grand mistake, and their mistake has brought upon them great sufferings. This is no fancy sketch, gentlemen, I know from the very best authorities, of the families of professional men being supported during the last winter from houses of charity.

After what the mercantile world has passed through, and is now passing through, need I speak of it, look at the thousands of young men thrown out of employment, look at the thousands of others looking for employment, and cannot find it; I have known some of them myself offer to became house servants; but, poor fellows, they were not even fit for that; surely education brought suffering upon them. I could go on and give you many other evils arising from the facilities of this false

system of education, but you can imagine them all. However one, in particular deserves attention, and that is the neglect of agriculture, the neglect of that very thing upon which all, each, and every one of us, are depending for our daily bread, let the agriculturist fail, the professional man, the mercantile man, tradesman and all, must suffer, and because of its neglect, is due at the present day, nine-tenths of all the suffering the world is passing through, still, young, strong, healthy men, lured by false appearances, will persevere in forsaking the land, and crowding into towns and cities, destroying the legitimate callings of others, and bringing ruin on themselves.

Gentlemen, you will remember I am not opposed to education, for as I already said, I consider it a great blessing; what I oppose is the *false system* of education in the present day, which I hold, has brought suffering to the human race, that our fore-fathers were unacquainted with, and until this system is changed, and education is provided upon a sound basis, each person obtaining that education suitable for their position and calling, *suffering* will continue to increase, and consequently so will insanity.

THE PNEUMATIC SYSTEM OF SEWERAGE AND ITS APPLICATION TO THE CITY OF MONTREAL.

By R. Carr Harris, C.E., M. Inst. C. E.

Among the great questions which are still pressing upon society for solution, there is no one of more importance than that of finding out the right way of dealing with the sewerage of towns. Our old systems are on all sides acknowledged to be most unsatisfactory, leading to enormous expense, and yearly causing an amount of misery, sickness and death which can scarcely be calculated. Rich and poor are alike struck down by the fatal gases and the infectious diseases disseminated by our net-work of sewers, which not only let their deathly vapors leak through into the streets, but also discharge them into the chambers of our houses.

Custom has dulled our perception of these dangers, which if newly presented to our minds would startle us with their reality.

Few know how small the germ may be in zymotic diseases, and how rapidly it may develop. Like a microscopic cell of yeast, it has the power of developing countless multitudes of cells, and a single infected person may become the prolific centre of disease.

It is a matter of common prudence to maintain the body in health by removing and disposing of the dangerous matters given off by the human body in an expeditious and safe way.

All classes and politics are alike anxious to have this question of an efficient sewerage solved.

While on a visit last year to Europe we had occasion to examine professionally the celebrated system of sewerage known as the Liernur pneumatic system, the invention of an eminent sanitary engineer of Holland (Capt. Liernur). It stood the test of a full and careful examination, and fully confirmed the high reports which we had heard of it. We shall state in this paper the leading features of the system, and show how thoroughly it removes all the great evils of the water carriage system, which is the one in use in Montreal. The article will be limited to a general description of the system and its results, omitting many professional and technical details which we have collected.

This system of sewerage has been in actual operation five or six years in several large continental cities. Its success is not open to doubt; it is a fact.

The common or water carriage system may be briefly described as follows: The excremental matters, such as contents of privies, chamber and kitchen slops, scraps, &c, are hurried into common sewers, diluted with an enormous volume of water, and floated to the nearest river, lake or sea.

The pneumatic system of sewerage is governed by the fundamental principle that a system of town drainage should aim not only to remove filth and rain waters, but to keep soil, air and sub-soil water in a pure state. A moment's consideration

shows how important it is to keep the soil of a city pure when we remember that every fall of rain, as it soaks down, makes the soil act as an exhaler, squeezing into the air the poisonous germs which have collected, so that a shower of rain instead of being the natural provision for purifying the air, is converted into a disseminator of disease in its most insidious forms.

The pneumatic system separates the sewage into two distinct parts and conveys each away by appropriate channels. The previously existing sewers are restricted to the conveying away the rain and other harmless waters. For the removal of fæcal matters there is provided a system of small iron pipes, which are just large enough to admit a man's hand ; no larger pipe is used than 5 inches in diameter. One of these pipes runs underground along each street. The closets are all connected with these street pipes by branch pipes. At convenient points, generally where two streets cross, there are small iron tanks sunk underground, called " street reservoirs." The street pipes open into these reservoirs. From each street reservoir a pipe leads to a central station and enters the main reservoir, which is also an iron tank. At the central station there is an engine for creating a vacuum or exhausting the air from the main reservoir.

By opening cocks in the pipes entering the main reservoir, the vacuum is immediately extended to the street reservoirs, and from these it is continued through every line of street pipes, and to every closet, the contents of which are at once drawn, or rather sucked, into the street pipes, thence into the street reservoirs, and finally from these into the main reservoir.

A small quantity of sulphuric acid is now added, to prevent the formation of ammonia during the evaporating process, and the whole mass is subjected to heat until it is reduced to a dry and odourless powder, or *poudrette*.

The heat is derived largely from the exhaust steam of the engine and the flame and smoke of the furnace.

The *poudrette* is sold as guano. During the whole time from first to last the *fecale* has been in a vacuum, hence no gases can have escaped. Even the air which the exhausting engine

draws from the pipes and reservoirs is passed into the furnace ; Thus all noxious gases and typhoid germs are literally burned up and forever disposed of.

Few can have failed to notice the unpleasant odour prevailing in even our best regulated water-closets. We are accustomed to it, and pass it by as merely a little closeness.

But in truth it arises largely from the presence of the most fatal and insidious gases, which come directly from the sewers.

Professor Tyndall, in a letter to the *London Times*, speaking particularly of typhoid fever, which annually infects 150,000 of the population of the city, says : " The seat of the disease being " the intestine, with well appointed water-closets, it is not in the " sick room that the mischief is done, but often at a distance " from the sick room, through the agency of the sewer, which " Dr. Budd graphically describes as a direct continuation of " the diseased intestine. Hence the mystic power of sewer " gas." We " trap " the connections between our houses and the sewers and fancy ourselves secure ; but, indeed, they are but traps to deceive us.

Mr. Baldwin Latham, one of the most widely known authorities on sanitary engineering in Britain, speaks as follows about " traps " : " All ' traps' are now formed either on the " water-trap or valve-trap principle, or a combination of the two. " All water-traps are liable to become untrapped, by running full " bore and acting as a syphon proper, the induced current " creates a vacuum below the ' trap,' air follows the flowing " water and drives or sucks out sufficient water from the trap " to leave the aperture unsealed. Another and not uncommon " cause of the failure of a trap is the entry of some substance " which will act as a syphon and drains every drop of water out " leaving it unsealed. The traps of sinks are very apt to become " untrapped, in consequence of a thread or two of a dish-cloth " entering and hanging partly in the water of the trap and partly " down the drain, when it acts as a syphon and drains the trap. " Valve traps are even more defective still, for it must not be " forgotten that as traps are used with the sole intention of

" preventing the back passage of sewer gas from our sewers, as " water flows down, air by the same means flows up."

Neither is it effective to have several successive traps on one line of pipe, for in this case the lower traps will frequently untrap the upper ones. Another very common way by which traps are rendered useless is the accumulation of gas in the sewers consequent on the stoppage of the discharging outlets by high water. This may occur, in the case of a river, on any unusual rise in the water, such as a freshet.

In the case of tidal waters it occurs twice every twenty-four hours.

In this manner the gas has frequently been known to accumulate to such an extent as to cause a great pressure in the sewer. A small pressure is sufficient to make the gas bubble up through the water in the trap.

Mr. Latham considers that the only remedy is to " cut off " all direct communication between our houses and the sewers."

Cost of maintenance is another matter in which the pneumatic system is vastly ahead of that by water carriage.

Our sewers are constantly breaking, bursting, or getting stopped up, and as for our domestic arrangements, it is needless to remind any housekeeper of the annual expense and inconvenience caused by necessary repairs to their house drainage.

The pneumatic system, by its simplicity, compactness and separation of difficulties, obviates all this.

Let us now draw a few comparisons between the system of water carriage, as used in Montreal, and the pneumatic system :

Firstly. The filth resulting from the life of over 100,000 people is now floated through large and foul sewers, and the sewer gas is continually escaping into our chambers.

By the pneumatic system all this is entirely averted, as any leakage of gas which does occur must necessarily be into the pipes and not out, there being a vacuum in the pipes, and the formerly foul sewers are converted into channels for conveying harmless waters.

Secondly. By the present system the soil of the streets is

poisoned by soakage of water and leakage of gas in all directions, out of the sewer, thus furnishing a never-failing reservoir of fever germs to be forced out of the ground into the air by every shower of rain.

By the pneumatic system this evil entirely disappears. All gases are closely confined until they are utterly destroyed by fire.

Thirdly. The entire sewage of the city is now discharged into the river, there to indefinitely float about and be stranded and to pollute the waters.

The pneumatic system would discharge no sewage into the river.

Fourthly. The city receives yearly enormous quantities of food drawn from the surrounding country, and consisting of the most valuable constituents of the soil, almost none of which are ever returned to the soil.

It would be impossible within the limits of this article to state this evil in the alarming light in which it is shown by Baron Liebig in his work on Agricultural Chemistry and the exhaustion of countries, and to which we refer the reader.

The pneumatic system returns the whole of these constituents to the soil in a portable and harmless form to perform their proper part in the grand cycle of production, to help the farmer in his laborious struggle with climate and soil, and to render more productive his fields, thereby reducing the cost of living in the cities.

Fifthly. Under the old system repairs are incessantly needed in our houses as well as in our streets. All are aware of the high charges, the annoying delays and the stupid blunders of plumbers: the round has to be gone through every year, and must be fresh in the minds of us all.

By the pneumatic system this is entirely removed, there are no valves to get out of order; the arrangements indoors and out are simple and compact, while the great inward pressure caused by the vacuum in the pipes sweeps instantly before it what might in the water carriage system cause a vexatious stoppage.

Dr. Edgeling, the Senior Medical Government Inspector of Holland, says: "The Liernur Pneumatic System of dealing "with the subject (of sewerage) is just the reverse of what has "been done hitherto by engineers. They all mixed the various "kinds of refuse matters with large quantities of water in one "general mass, obtaining thus scientifically an enigma which no- "body could unravel, and practically a bulky semi-fluid mass "which no one knew what to do with.

"The pneumatic system, on the contrary, keeps the various "kinds apart, and prevents confusion at the outset, while the "most troublesome of all kinds of refuse, the fæcal matter, is "not scattered in a thousand different directions, but is kept "isolated and a close prisoner until it is deprived of all power to "hurt, and has become again a useful participant in nature's "eternal circuit of matter."

The system is equally suitable to the lowest lying parts of the city as to the highest, and probably its introduction to some of the very low and flat parts of Montreal, as, for instance, the neighborhood of the river and canal banks, would obviate the necessity of those pumping works which would otherwise be required in order to give the sewage of those districts the fall necessary under the water carriage system.

Viewed in this light its application to some districts of the city might result in a saving to the Corporation of the expense of pumping works, in addition to the advantages we have already pointed out.

There is a period in the growth of all large cities, when they are forced for self-preservation, to re-organize their sewerage system; this has generally been done at an enormous expense, and in the case of those cities which have hitherto done so, it has resulted in the construction of works, admirable in their engineering character and vast in extent, but which have thus far in nearly all cases failed in a sanitary point of view.

If the city of Montreal has not already been forced to re-organize her sewerage, the day cannot be far distant when she will be obliged to do so. Is it not evidently to her advantage before that day shall come to give a practical trial to the

enlightened system which we have been describing, and which must ultimately supersede all others, having already stood the severest tests, and received the unqualified approbation of many of the leading engineers, medical men and statesmen of Europe. Her example would probably be quickly followed by other cities in Canada, and every member of the Corporation would have the satisfaction of knowing that he had helped on the work of improving the health of his fellow citizens and rendering their lives more secure.

The Berlin (Prussia) *Tribune* states that Dr. Strousberg, an eminent financier and contractor for public works has just entered into a contract for putting the Liernur sewerage system into the whole of St. Petersburgh for nearly £4,000,000.

"The war of systems had been going on for some time in their "capital, and their chief engineer, Count Stuckenberg was ap- "pointed to examine and report on the water carriage and the "Liernur systems. He spent some time in Holland examining "the Liernur system, and reported upon it in the highest terms "with the above result. The system is worthy the most atten- "tive consideration of our municipal authorities, sanitary "engineers and medical officers of health."

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL

Cases of Locomotor Ataxy. Under the care of Dr. Ross. Reported by MR. R. L. MACDONNELL, B.A.

CASE I.

L. H., aet. 30. A sergeant of police. Admitted Dec. 5th, 1875, under Dr. Ross. Has been married for six years. Wife died three years ago. One child. Never been intemperate. Never addicted to excessive venery. Never had syphilis. No history of nervous disease in his family. Often exposed to cold and wet, while in the discharge of his duty. For

the last few years had occasional shooting pains in lower limbs and hips, never sufficiently severe to keep him from his work. Also suffered from coldness of feet, even during the warmest days in summer. About February last, occasional attacks of dizziness used to come on, one or two in the day, last a few minutes and then pass off. On the 1st April last while in church, he felt what is described as "stiffness and numbness" in the limbs, and was rendered so helpless thereby, that his friends had to carry him home.

The sensation passed off in about an hour, leaving him weak and unfit for work for three or four days. He returned to duty, and remained very well until August 6th, being troubled only by attacks of dizziness. On that day while at stool the rectum prolapsed about six inches, but returned to its place in a few minutes. The next day the same thing occurred. Shortly afterwards while walking in the street he had an involuntary passage of fæces. Next the urine was retained and the catheter had to be used several times. Incontinence appeared subsequently. There was great difficulty in micturition owing to weakness in the walls of the bladder. This has lasted ever since, but in a much more limited degree.

It was about the middle of August, when he became unable to direct the movements of the lower limbs. At same time they began to feel numb, as if frozen. So quickly did this loss of sensation appear, that before long, they could fall out of the bed without his being aware of it. The sight became weak last September, but this state did not last beyond a few days. Strabismus, diplopia or triplopia never appeared. On two occasions suffered intense boring pain, once about three months ago, in the foot, and yesterday in the little finger. On both occasions it lasted but a few hours. For last two years has experienced complete loss of virile power and complains of numbness about genitals. Seminal losses have occurred once or twice within the last year.

Present condition.—Intellect unaffected; articulation normal; face symmetrical; no twitching of muscles of face or lips; hearing good; sight perfect; optic disc healthy; no strabismus;

no ptosis; pupils normal, not contracted; respiration normal, complains of a sense of constriction about lower chest and abdomen as if an elastic jacket encircled him, and also says he feels as if tight straps were applied round the thighs. Pulse 100, large, regular. Heart sounds normal. Tongue clean, appetite good, bowels regular. Urine, sp. gr. 1.018. No albumen. Deposits oxalate of lime in large quantity when allowed to stand two or three hours. Weakness of propulsion in bladder. No stricture. No spontaneous pain in any part of the spine. No deviation of the spine. Lower extremities thin, and are said to have undergone wasting during the last year.

Lies in bed quite comfortably and feels no inconvenience from his condition. *Sensibility.* Feels numb up to the waist, more so on the right than left side, especially in the genitals. Tactile sensibility is considerably impaired. Moderate pricking, pinching, etc., are not felt at all. At times cannot tell the difference between a prick of a pin and a stroke with the finger. Tickling feet produces no reflex action. When the points of a compass are applied, even with great force, he feels but one point at all distances, up to the lumbar region, where sensation is normal.

On percussing the spine with the knuckles, there is a sore spot found about the 8th or 9th dorsal vertebra. Sensations of hot and cold to the spine are properly appreciated, and felt with greatest intensity at this sore point. Differences of temperature are properly felt over the whole body.

Motility. Muscles are strong and when the limbs are flexed, they cannot, except by preternaturally strong individuals, be extended against his will. When supine and asked to raise a leg at right angles to the body, he does it in a peculiarly irregular manner. The limb wavers from side to side before it becomes erect. The slightest movement of the foot is exaggerated and out of proportion to the extent of force required to perform the given act. Cannot stand erect without aid, or with eyes closed. Keeps feet at some distance apart. Cannot walk more than a pace or two without assistance. Uses a cane or rests on the hand or even the finger of a friend. Pace is short, the legs

lifted high, and the heel struck forcibly on the ground. The hands are stretched out on either side to balance himself. Eyes firmly fixed on the ground. Cannot turn round short, and is obliged to make a wide detour to return to the place from which he started. Falls instantly when eyes are closed. Says that when walking he cannot feel the floor and that his feet are to him as if they were large sponges filled with water.

These appearances vary slightly daily. On the day of admission he could scarcely move about at all, but to-day he can manage to get to the end of the ward without assistance.

Dec. 17*th* Slight injection of conjunctiva.

Dec. 21*st* Conjunctiva clear.

Dec. 28*th* Pain in lumbar region, rather severe.

January 2*nd*, 1876, Discharged.

Case II.

D. R., aet. 40, admitted Dec. 11th, 1875, under Dr. Ross. A laborer, unmarried; more than twelve years ago had simple chancres not followed by secondary symptoms. Has enjoyed very good health all his life, and his present illness is the only one of a serious nature he remembers.

Has always been temperate. Has had to do very hard work, to walk very long distances, and to undergo frequent exposure to cold and wet. No history in his family of any neurosis whatever. Has never been addicted to sexual excesses. Ten months ago, while in perfect health found his legs becoming very weak, and in two days was unable to undertake any work at all. The sensation he experienced was that his body was too heavy for the legs. There was a constant inclination to fall forward, an effort at preserving the equilibrium, and a tendency to lift the feet high from the ground and to throw them out to either side. At the same time triplopia and internal strabismus of the right eye set in. Came to the Montreal General Hospital three weeks afterwards. Now, walking was almost impossible and the feet were forcibly stamped on the ground. He could not stir in the dark without falling. Noticed himself that the actual muscular power in the lower limbs was unimpaired. Never at

any period in the disease suffered pain. Under the care of Dr. Roddick he improved considerably and in three months went back to work. He was engaged in excavating, where he found he could get on best when resting his back against some support, and that then he could handle the pick and shovel as well, if not better than any of his companions. At this time the triplopia had disappeared. He could walk a distance of a mile and a half to his work, without feeling fatigue. There was no irregularity of locomotion, as long as he kept to the smooth pavement, but he found great difficulty in crossing streets where the ground was rough and broken.

At the end of October, the legs again became weak, and this condition not tending to improve, he re-entered the Hospital. This time he noticed that the right leg seemed worse than the left, though there was no perceptible difference at the time of the first attack. Never noticed any numbness in any part of the body or the sensation of an elastic band encircling the abdomen. Sexual power has been weak for the last eight years. Never had spermatorrhœa and very rarely nocturnal emissions. Never masturbated. Never had incontinence or retention of urine, or constipation.

Present condition.—Stout, well built muscular man. Intellect naturally obtuse, is unaffected; articulation distinct; no stammering; no difficulty in pronouncing certain words or letters. Muscles of the face act perfectly; hearing good; no ptosis; slight internal strabismus of right eye. At present no diplopia, or triplopia; sight good; pupils of equal size; no injection of conjunctiva; optic disc healthy. Respiration natural; respiratory movements regular; pulse 80, regular and full; heart sounds normal. Appetite good, digestion easy; bowels regular; no constipation. Urine healthy. No pain in spine, even on hard percussion. The lower limbs look well nourished and do not suggest the idea of paraplegia. Muscles of the calf well developed.

Sensibility.—Tactile sensibility a little obtuse and less acute in left than in right leg. Differences of temperature are immediately perceived, and painful sensations as pricking, pinching,

etc., are immediately and acutely felt. The distance at which two sharp points simultaneously applied, are felt as one, is as follows: foot $1\frac{1}{2}$ inch, calf of leg $1\frac{5}{8}$ inch, thigh $2\frac{1}{4}$ inch, lumbar region $1\frac{3}{4}$ inch.

Motility.—When lying on his back can move his legs perfectly, and they cannot be flexed or extended against his will. If he be asked to rise, the efforts which he makes are peculiarly striking. He is obliged to take hold of some neighbouring object, and his legs seem to shake under him. He cannot remain long in the standing posture without resting on a stick. If he be made to close his eyes he soon loses his balance and is obliged to open them to save himself from falling. Stands with feet wide apart and totters when they are brought together. The pace is short, the leg raised higher than is necessary and the foot brought flatly down on the floor with a slap. Eyes are kept fixed on the lower limbs. Can walk tolerably well with very little assistance, even the support of a friend's finger, or when some one walks in front of him, in which case, the eyes are firmly fixed on the person's feet. Stops abruptly before he can turn round. From the attention he is obliged to pay to all his movements and the consequent mental fatigue, he is averse to walking and soon gets tired. The muscles and nerves of the upper limbs are entirely unaffected.

By way of experiment Potass Iodid. gr. v tid. was prescribed.

Dec. 31*st.*—Complains of slight shooting pains about the legs.

Case III.

X. Y., aet 35, a merchant. Admitted to the wards of the Montreal General Hospital, Dec., 1875. Under Dr. Ross.

A small, thin, sharp featured man. Always been of temperate habits. Never exposed to cold or wet. Never had syphilis, but has had one or two attacks of gonorrhœa. No history of nervous diseases of any kind in his family. Was married in 1867, wife died in 1870. No children; five miscarriages.

His present ailment dates from 1867, six months after mar-

riage. He attributes all his troubles to sexual excess. States that for the first year of married life, he was in the habit of performing the venereal act nine or ten times in the twenty-four hours. During the second and third year, he was unable to effect more than three or four connections in the day, and six months after his wife's death he found himself completely devoid of virility. These excesses were indulged in, altogether at the solicitation or rather command of his wife, and were in the majority of instances, carried on against the husband's inclination. Her early death was due to some derangement of the heart, said by her medical adviser to have been brought on by the constant state of excitement in which she existed. The patient, four months after his wedding, began to feel at times, paroxysms of the most severe stabbing pain, confined to a small spot, just below the right nipple. In a few days the pain moved round the chest and took up its position in the lumbar region. It lasted several days at a time, and at the commencement of the disease recurred about every three months, the intervals gradually shortening until it seemed to last all the year round. All sorts of applications were ineffectually used for its relief. Medical men of all sorts and quality, from the itinerant vendor of Radway's Ready Relief to the leading members of the Canadian profession, were in turn consulted. The pain must have at one time resembled that caused by abdominal aneurism, in as much as, he told me, that a doctor in Quebec, had repeatedly applied a sthethoscope all over his body. A good deal of relief was obtained from Morphia given hypodermically and by the mouth, so that he gradually became an habitual opium consumer. Half a grain of the alkaloid two or three times a day was his usual allowance. The free exhibition of a purge either eased the pain at once or served to prevent its recurrence for a day or two. An emetic exercised the same effect, or frequently vomiting came on during a paroxysm and gave prompt relief. Never experienced any other symptom except pain, until 1873.

One night while dancing he felt a sudden weakness and numbness in the calves of both legs, and was obliged to sit down immediately. The feeling passed off very soon, but several

days afterwards, found that his legs became easily fatigued, and that he could no longer walk from his house to his office. In three or four months, the first sign of want of power of co-ordination of movement made its appearance. He found that when walking in the street at the side of a friend, he had an irrepressible tendency to bump up against him, although he could walk perfectly straight when alone. Next, there was a difficulty in passing people moving in an opposite direction, and especially women. So great was his perplexity under these circumstances that he used after a time, to stop, and hold on to some post until the individual had passed him. Was first obliged to use a stick about a year ago, and since then has been unable to dispense with it. Used to feel very nervous and shaky, and could not look any body in the face, without experiencing a sort of clonic twitching of the facial muscles. The feet have felt numb for over a year. At first the unpleasant feeling could be done away with by friction, now the effect is lost. Numbness has extended from the foot up to the knee. Six months ago had double vision, and noticed that it occurred whenever the stomach got out of order. The bowels have been extremely irregular throughout the whole course of the disease, at one time remaining confined even for one week, at another being extremely loose. Involuntary passages of fæces have taken place on four or five occasions, and were always preceded by a sense of numbness about the anus. Twice the urine was retained and had to be drawn off with a catheter. Frequently suffered from incontinence, especially when walking about. Has lost weight considerably in the last five years.

Present condition.—Intellect clear. No pain in the head. Manner highly nervous and excitable. Both pupils normal. No ptosis. External strabismus of right eye. This was noticed for the first time yesterday, although for a considerable period previously he could see more clearly with one eye shut. Articulation unimpaired. Appetite good. Bowels confined. All power of erection is completely lost, and, since the last month, has had several seminal emissions, unattended with sensations. There is a sharp stabbing pain in the lumbar region, which increases

in severity when the bowels become loaded. This latter condition may be due to the large quantity of opium he is taking. A purge always gives relief. Motion and sensation in upper extremities unimpaired. The lower limbs are numb from the knee downwards, and the legs feel to him as if they did not belong to the rest of the body. When in bed he does not know their position under the clothes. Muscular power is unimpaired, and the legs cannot be flexed or extended against his will. Cannot get off his chair without laying hold of some neighbouring piece of furniture. Mere standing becomes soon impossible unless he leans on a stick. Falls down the instant the eyes are closed. In walking the feet are lifted too high, thrown out to each side and stamped on the ground. Great difficulty in turning. Falls down when the eyes are not directed on the feet. Says that he sees the floor but cannot tell when the feet touch it. Complains that the feet are too heavy to lift.

Urine.—Normal.

I was unable to prolong the examination owing to the patient's sudden determination to go home.

Case of Cirrhosis of the Liver with enlargement.—Under the care of Dr. Roddick. Reported by Mr. James Bell.

James H., aged 34, of intemperate habits, consulted Dr. Roddick, about the 27th of April last for jaundice. He stated that seven weeks before he had a severe fall, having tumbled down stairs. Pulse was rapid, 100. Tongue coated, and of a greenish-yellow colour. He had also diarrhœa. Great enlargement of the liver, both in the vertical and horizontal directions, was found, and patient complained of tenderness in this region. The area of dullness over the spleen was also increased. A basic murmur existed over the heart.

He was ordered a mixture of nitro-muriatic acid and taraxacum, and pulv. kino co. for the diarrhœa. Two days later on visiting him, Dr. Roddick found that he had been delirious, and ordered a draught of chloral., pot. bromid. and tr. hyoscy.,

and recommended his removal to a private ward in the hospital. After admission the vomiting and diarrhœa continued, the stools being of a very light colour.

He still complained of pain over the hepatic region, for which a blister was ordered.

Bismuth and sodium bicarbonate and lime water in his milk were given for the vomiting. The delirium had almost disappeared, though at times he was noticed to be incoherent, and was restless at night. This state of things continued without interruption for three or four days, when a reddish blush was discovered over the nose, preceded by a chill, increased temperature, &c. This proved to be an attack of erysipelas which extended over the face and scalp. He was treated with large doses of iron, and stimulants, but gradually sunk under the attack, and died on the 4th of May.

Post Mortem conducted by Dr. Osler 18 *hours after death.* Body well nourished, and of fair muscular development. Rigor mortis present. Several small spots of purpura existed upon the skin, one very evident on the anterior surface of the left arm.

On making the preliminary incision a thick layer of panniculus adiposus was cut through. Muscles looked healthy.

Heart.—Pericardium contained about 3vi of amber-coloured fluid. A thick layer of fat covered the right ventricle, entirely concealing the muscular substance. Right ventricle contained a small amount of blood, no clots. Tricuspid and pulmonary valves normal, and tinged of a light yellow colour. Anterior segment of former slightly thickened. Left ventricle, empty, walls of normal diameter. Margins of mitral valves, and attached portions of chordæ tendinæ, thickened. Aortic semilunar valves firm, and atheromatous at the bases, Corpora Arantii well marked. Margin of one segment fenestrated.

Pleura and Lungs.—No fluid in pleural cavities. Along the lower margin of the ribs a layer of fat extended towards the intercostal spaces, in some instances projecting as a small fold.

Lungs, slightly puckered at the apices. Crepitant throughout, except part of the lower lobe of left lung which was in a

state of collapse, and a similar condition in a small portion over the heart. Beneath the pleura at the base of the left lung were five or six small extravasations, one about the size of a sixpence. A large amount of frothy serum, mixed with blood, escaped on section of the organs. There was post mortem congestion of posterior part of lungs. Bronchial mucous membrane healthy looking. The frothy expectoration in trachea and bronchi was of a yellowish colour.

Liver, projected considerably below the margin of the ribs. Weight, 7 lbs. The whole surface of the organ was studded with small firm projections of the size of a pea, and larger. These nodules were of a dark greenish yellow colour, the intervening tissue being white, and were very evident at the anterior free border, and in the left lobe. On the under surface of the latter the largest nodules existed. On section the organ was excessively firm, of a greenish yellow colour, and the cut surface showed the lobules everywhere surrounded by a growth of connective tissue. The application of the usual tests did not yield the amyloid reaction. On microscopic examination, the characteristic interlobular growth of fibrous tissue was well marked. Many of the liver cells were infiltrated with fat, but not to any great extent—not sufficient to account for the enlargement of the organ. Portal vein appeared much dilated.

Gall bladder, elongated and filled with a mass of inspissated bile. Towards the orifice of the ductus hepaticus the bile was collected into three small balls. Pressure upon the gall bladder did not force anything out of the papilla biliaria in the duodenum.

Spleen.—Weight, 19 oz. Capsule a little thickened, and in places somewhat puckered. On section the pulp was soft, very friable, and of a dark purplish red colour.

Kidneys.—Right 9½ oz. Capsule easily detached, thin and transparent. Surface of organ of a yellowish colour. Venæ stellatæ beautifully marked. On section the proportion between cortical and medullary substances appeared normal; both had a greenish yellow hue. The large collecting tubules of the

pyramids were in many places filled with a dark greenish material which on examination proved to be urates and biliary matters. Left, weight oz. 8. On section it appeared to contain rather more blood than the right. General appearances the same. About the pelves of both organs there was a considerable amount of fat.

Stomach.—Contained ℥vi of semi-coagulated blood. Mucous membrane of a dark livid red color, at dependent parts, and in general thickened and tumefied, easily torn with the nail. Numerous small ecchymotic spots existed throughout the mucous membrane.

Intestines.—Coils of small bowel very dark externally, and contained a quantity of black matter,—altered blood. Mucous membrane stained. No ecchymoses. Large bowel contained some masses of fæces.

Bladder.—Contained ℥xv of dark urine. Healthy.

Brain.—Calvarium, on removal, very thick and heavy; inner surface deeply grooved by the meningeal arteries. Diploë of a dark red colour. Dura mater of normal appearance. No clots in long sinus. Pacchionian granulations numerous and large. Arachnoid and pia mater normal; veins of the latter moderately full. Brain substance firm and healthy-looking. Puncta vasculosa evident, and the blood which exudes stains the surrounding white matter of a yellowish colour. A few drachms of fluid in the ventricles.

Cerebellum and ganglia at the base appeared healthy.

Reviews and Notices of Books.

A Manual of General Pathology, for the use of Students and Practitioners of Medicine. By Ernest Wagner, M.D., Professor of Pathology in Leipzig; translated from the sixth German edition, by Drs. Van Duyn, and E. C. Seguin. pp. 728. William Wood and Company, New York.

It is with great satisfaction that we see this standard German work appear in English form, and fully endorse the editors state-

ment "that no book in the English language gives such a thorough résumé of the elements of medicine, and in none is the matter so arranged as to be available for both the student and the practitioner." We have presented to us, here, in one volume, the modern principles of the science deduced from the most reliable sources. The vast and ever accumulating array of facts bearing upon the different departments of medicine has been carefully studied, the wheat separated from the chaff, and the comprehensive, easily intelligible treatise before us is the result.

The work is divided into four parts, under the headings General Nosology, General Etiology, General Pathological Anatomy, and the Pathology of the Blood.

In the first section the general nature of disease is considered, the methods of its extension studied, and valuable suggestive remarks made upon symptoms, diagnosis, course and termination of disease, apparent death, and lastly upon the causes of death. On every page the general physician will find matter of interest, and much to cogitate upon as he goes his rounds. The remarks with reference to diagnosis are specially good, so much so that we shall briefly indicate the three ways to arrive at a diagnostic judgment. The first method is diagnosis at a distance, the recognition of the disease at a first glance. The second way constitutes diagnosis from the anamnesis; *i. e.*, from the story the patient tells of his illness. The third and surest diagnostic process is the objective investigation. The respective value of each method is commented upon, and general directions given for the examination of patients. Under the heading General Etiology, we have an exhaustive consideration of the causes, predisposing and exciting, internal and external. The influence of climate, conditions of the soil, atmosphere, dwelling, &c., in producing disease, are fully dwelt upon, and the section concludes with a description of the various parasitic affections, animal and vegetable. The latter have of late years received an extraordinary amount of attention from the supposed influence Bacteria and cognate organisms have as causes of disease, and we find here embodied all the recent literature, up to 1875.

The third and most extended section deals with the all important questions of general pathology; such as Inflammation, Thrombosis, Embolism, the Degenerations, and New Formations. It would be impossible in the limited space allotted us even to allude to the valuable chapters, all of uniform excellence, on these subjects. We have here a full exposition of the modern Pathology of Tuberculosis, and Professor Wagner gives his adherence to Buhl's theory, that it is a specific resorption and infectious disease due to the absorption of material from caseous foci, the result of former inflammatory affections. The encapsuling of these masses is the chief, though not absolute, protection against the absorption, which is effected by the lymphatics, and may be either local, *i. e.*, confined to the neighbourhood of the cheesy mass, or general, resulting in disseminated tuberculosis. The disease as artificially induced in animals, is assumed to be identical with that occurring in man, and references are made to the views of the different writers upon this subject.

The pathology of the blood—the last section—receives a very thorough consideration, chapters being devoted to all those affections which are due to derangements, in quantity or quality, of the elements of this fluid, such as Anæmia, Albuminuria, Leucocythæmia, Uræmia, Diabetes, Pyæmia, &c. Perhaps the ablest article in the work is that on Fever, which extends over nearly 100 pages, and contains a mass of valuable information not to be found in any single work with which we are acquainted. A very interesting account is also given of the various recent fever theories.

We should like to see this work in the hands of every intelligent practitioner throughout the country. It contains those fundamental principles of the science, a knowledge of which is essential to any man who wishes to practice medicine in a rational manner.

The translation is excellent, and the general appearance of the book creditable. We object, however, to be compelled to shelve the 40 pages of advertisements which Messrs. Wood & Co., have bound up with the volume. It is a wholly unnecessary addition to the bulk of the work, and the practice is universally reprobated by medical men.

A brief Report of cases of Sympathetic Ophthalmia and Sympathetic Irritation. By A. N. Rosebrugh, M. D., Surgeon to the Toronto Eye Infirmary.

We have received a copy of the eighth annual Report, of the Toronto Eye and Ear Infirmary, together with three pamphlets written by Dr. Rosebrugh, Senior Surgeon to that Institution.

Two of the papers may be allowed to pass without comment, except that we are surprised to find adhesions between the anterior capsule of the lens, and posterior surface of the iris described as "Anterior Synechia." Not so, however, with regard to the third paper, in which the Doctor states that he had the privilege of endeavouring to point out:

1st. That Sympathetic Ophthalmia is a peculiarly destructive form of inflammation of the eye, arising solely from irritation in the opposite eye, and that as a rule, it runs its course unchecked, and the patient is left hopelessly blind.

2nd. That the most common cause of Sympathetic Ophthalmia, or Sympathetic Irritation, is injury to the opposite eye, particularly wounds in the ciliary body.

3rd. That the only possible means of arresting the progress of the disease is the early removal of the injured eye, and that in all cases when the injured organ is enucleated before Sympathetic Inflammation is actually established, even although it may be very much weakened from Sympathetic Irritation, the uninjured eye never becomes affected with Sympathetic Ophthalmia.

To dispel any lingering doubt in the public mind as to the truth of these propositions, he comes manfully forward with his formidable experience of eleven cases from which he draws five conclusions, the same being a reiteration and amplification of the three cardinal propositions, and to clinch the argument, Mr. George Lawson, of London, is made to stand Godfather to this prodigy of intellectual conception.

Doubtless Mr. Lawson will feel highly complimented by the honour thus conferred upon him, but we scarcely think he would be prepared to endorse all the statements contained in these propositions; indeed it is a pity Dr. Rosebrugh had not made

himself more familiar with the current Ophthalmic literature, before so positively affirming that "the only possible means of arresting the progress of the disease is the early removal of the injured eye," for by so doing, he would have found in the Royal London Ophthalmic Hospital Reports, vol. vii., part iv, page 443 et seq., a case of Sympathetic Ophthalmia recorded by Henry Power, *in which recovery took place without removal of the injured eye.* The remainder of the 3rd proposition, is equally unfortunate, as there are several cases of Sympathetic Ophthalmia on record *in which the inflammation did not become actually established until after removal of the injured eye.* Nor is this a matter of surprise when we take into consideration the natural history of the disease; for it is an established fact that several weeks always elapse between the receipt of the injury and the outbreak of inflammation in the other eye. During this interval the impetus to morbid action is not suddenly transmitted from one eye to the other, but probably travels slowly, first to the nervous centres, and thence outwards to the healthy eye, else why should so long a time elapse between the injury and its consequences?

The 1st and 2nd propositions are merely the expression of incontestible clinical facts which should be familiar as household words to every medical man in the country; but in the 5th conclusion we again meet with a sweeping assertion which the author seems to think settles the question at issue beyond all doubt. He says: (5th) That the removal of the injured eye offers the best chance of arresting the disease; and that as seen in case 5, if this operation be resorted to in its early stages, there is a good prospect of its doing so.

Now, we have not the hardihood to ask the readers of these remarks to attach much weight to the opinions of R. Brudenel Carter, of St. George's Hospital, London, or Prof. Schweigger, Ophthalmic Surgeon to the Charité Hospital, Berlin, if they happen to be at variance with those of the Senior Surgeon to the Toronto Eye and Ear Infirmary. We venture, however, to quote from their respective works. R. B. Carter, in his work on Diseases of the Eye, page 332, says, "when once the second is

affected, the removal of the first (the injured eye) is at least of doubtful utility."

Prof. Schweigger in his "Handbuch der speciellen Augenheilkunde," page 334, says: "If there is any prospect of the injured eye retaining useful vision, it should not be extirpated, for whilst the benefit to be derived from such a procedure is extremely problematical, there would be no sense in sacrificing an eye which retains even a small amount of vision." Other distinguished Ophthalmic Surgeons, such as Mackenzie and Sœlberg Wells, appear to entertain similar views in regard to the removal of the injured eye. Dr. Rosebrugh's fifth conclusion has apparently been drawn from the result of treatment in a single case, and is open to the usual objections against *post hoc* arguments. For there is no certainty that the result would have been less favorable had the injured eye been retained. None of the other cases, except the first, are particularly noteworthy, but in the first case we are gravely informed that sympathetic inflammation set in two weeks after an injury and caused total blindness by the end of the third week. Surely the doctor must credit his readers with a vast amount of credulity or he would not have ventured to make such a statement upon hearsay evidence obtained from the patient two years after the accident had occurred. If the assertion can be proved to be strictly in accordance with facts, all those Ophthalmic Surgeons, who believe that four weeks is the shortest time within which Sympathetic Ophthalmia occurs, after an injury to the other eye, must own themselves to be in the wrong.

We fully agree with Dr. Rosebrugh that the operation of enucleation of the eye-ball is not a formidable one, but we must take occasion to warn the uninitiated against relying upon the application of a single fold of wet lint in the after treatment. Those who wish to avoid the occurrence of a very considerable and disfiguring ecchymosis will do well to take the precaution of applying a pretty firm compress bandage, at least for a few hours after the operation.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Hypertrophic Cirrhosis with Chronic Jaundice.

[With reference to a rare case of cirrhosis of the liver with enlargement of the organ published in this number of the journal, the following condensed remarks on the subject, translated from a recent paper of M. V. Hanot, of Paris, will be of interest.—Ed.]

Most authors who, after Laennec, studied cirrhosis of the liver, considered that to a greater or less extent, atrophy with contraction of the liver was preceded by another stage in which the organ was hypertrophied; but, according to M. Hanot this hypertrophy was entirely supposititious and theoretical. About 1846, Requin published two cases of cirrhosis in which the liver had remained enlarged to the time of the patient's death, and since that period the occurrence of two forms of cirrhosis began to be admitted: one, common cirrhosis or cirrhosis with atrophy; the other more rare, cirrhosis with hypertrophy. It was the latter form which was studied by Paul Olivier in 1871. Since which time have appeared the works of Hayem & Cornil, and several cases presented to the Anatomical Society in the year 1875. Hypertrophic cirrhosis has now therefore a positive existence, but it may be asked whether it be not simply a variety of atrophic cirrhosis, or whether indeed the term hypertrophic cirrhosis does not, at any rate in many cases, include morbid conditions which it would be improper to ally so very closely with the true classic cirrhosis. M. Hanot has not undertaken to study all these forms, but only one amongst them, which is especially characterized clinically, by enlargement of the liver and jaundice.

The liver is more or less increased in size, and its weight may amount to 6½ lbs. The capsule is inflamed and presents false membranes and adhesions to the neighboring organs.

The surface is generally somewhat granular or mamillated, but never to the same degree as occurs in atrophic cirrhosis. Upon section we find a matrix of fibrous tissue interspersed with little masses of $\frac{1}{50}$th to $\frac{1}{12}$th or $\frac{1}{8}$th inch in diameter, of a chamois-yellow, or greenish tint; in some cases it presents a deep green, or olive-green color, upon which again may be noticed fine tracks of a greyish hue.

The *histological changes* involve the connective tissue and the biliary ducts and secondarily the hepatic cells. They consist at first in a extralobular sclerosis without any tendency to contraction on the part of the new-formed connective tissue: generally there is also an intralobular sclerosis, but which may be, in different cases, of various degrees of intensity and extent; in one spot it is found to have almost completely isolated the lobule; in another, it surrounds and atrophies only the outermost cells of a lobule; in some places, even, the process of sclerosis has not extended into the interior of the lobule at all, but this is rare.

The lesions of the lobules themselves vary according to the stage of the complaint, but there is constantly to be seen a more or less intense infiltration of biliary pigment into the intercellular spaces and the cells themselves. In the advanced stages, the cells are more or less atrophied and more or less infiltrated with fatty granules.

But the most characteristic lesions are those of the biliary ducts: in this form especially we find proliferation of the epithelial cells of these canals, which are often infiltrated with bile-pigment, and an excessive development of the canals themselves not only without, but probably also within, the lobules.

Besides these lesions, there is generally hypertrophy of the spleen and chronic peritonitis which is usually limited to the region of the liver or of the spleen, but which may be more diffused.

As for the *symptoms*, they also differ from those of the common cirrhosis. The first indications generally consist in the occurrence of pains (usually of a dull character) in the right hypochondrium and at the same time or very shortly after, jaun-

dice ; at the same time also, there are generally, loss of appetite, general malaise, weakness, and some fever. When the affection is fully developed the following symptoms are observed : permanent jaundice, considerable enlargement of the liver, no ascites, or slight and temporary only, and then not appearing till near the termination of the case ; no (or at any rate very slight) dilatation of the subcutaneous abdominal veins. During this time, fever, pain, jaundice, all increase in intensity. The case generally terminates by some of the grave complications consequent upon severe jaundice. The disease runs a slow course and may last several years without interfering severely with nutrition.

With reference to the explanation of the symptoms, the jaundice is certainly caused by the chronic catarrh of the biliary ducts and is therefore of the character of jaundice from re-absorption. As to the enlargement of the liver—that is explained, says Mr. Hanot, by the presence of a considerable quantity of newly-formed connective tissue, and also by the abnormal development of the biliary ducts. The absence of contraction of the new connective tissue depends perhaps upon the relative integrity of the portal system, and also upon the enlargement of the biliary ducts which thus, to some extent, would also tend to prevent any such contraction.

The etiology of hypertrophic cirrhosis is yet rather obscure ; still the cases referred to by Mr. Hanot would seem to point principally to residence in warm climates, biliary concretions, perhaps intestinal catarrh, all circumstances in which the biliary system is injuriously acted upon.

If, as indeed appears most probable, it were fully established that the sclerosis was secondary to the changes in the biliary ducts, it would be right to contrast atrophic cirrhosis which is developed round the radicles of the portal vein with hypertrophic cirrhosis, having its origin round the biliary ducts, or if we choose, to use the terms a *portal cirrhosis* and a *biliary cirrhosis*. —(*Thése de Paris*, 1876.—*Revue des Sciences Médicales*, 15 *Avril*, 1876.)

On the Treatment of Ovarian Tumours by Electrolysis.—Dr. Semeleder, late lecturer in the University of Vienna, has an interesting paper on this subject in the June number of the *New York Medical Journal*, being a revised and enlarged edition of an article published in the *Wiener Medicinische Presse* under the title of "No more Ovariotomy." After stating that it is not his wish to claim priority in this method of treatment, as Drs. Fieber and Fromhold, of Germany, and Dr. Cutler of Cambridge, Mass., have each published cases of ovarian and uterine tumours treated in this way, he proceeds to detail six cases.

Case I.—A young lady, aged 18, had noticed for several years a swelling of the abdomen, which had begun in the left side, and increased gradually. When the treatment was commenced she had all the symptoms occasioned by a large abdominal tumour, which extended a little more to the left side than the right, and reached three centimetres above the navel. Percussion dull, tumour apparently had thin walls, but was very tense, fluctuation not observable. Greatest circumference two inches below the navel was 96 centimetres. The treatment was continued daily, even during menstruation, and over two months were required to make the cure complete.

Case II.—A young lady 24 years old, married and had two children. For two years past had observed a tumour in the left side of her abdomen, which had grown slowly, and had reached the size of a child's head, and was quite soft. The treatment began on the 27th May and on the 5th of July she was perfectly well. The cyst had been reduced to the size of an orange, and was quite solid.

Case III.—A woman of forty, with cystic tumour of left ovary, extending on the right side to the navel, and a hand's breadth over the median line; the left side was nearly all filled up by the tumour which extended upward to the ribs. Patient had never been pregnant, and menstruation had been regular.

After a daily treatment of six weeks, the tumour was so much reduced that it seemed unnecessary to continue it.

Case IV.—A lady, twenty-eight years old, married, had five

children. Since the last confinement had noticed that the abdomen remained very large, and finally detected a tumour. The left side, principally, of the abdomen, was occupied by a very soft fluctuating tumour, with apparently very thin walls, extending three inches beyond the median line, to the right, and one inch above the navel, while on the left side it extended still a little higher. On pressure three hard masses could be detected in the tumour, two small ones in the lower part, and one of the size of a small orange, close above the left side of the navel. Treatment was continued from the end of November to the 15th of February, being suspended for 5 days per month, during menstruation. When Dr. S. left Mexico (where all the cases had been treated) on the 15th of February, the liquid had been absorbed so far that the upper limit of the tumour was at the level of the umbilicus ; the hard lumps had undergone no change.

Case V.—This was considered a case of uterine fibroma with cysts, and the treatment begun in October, had caused by January disappearance of the liquid contents and reduction in the size of the tumour. " The treatment was continued all the " same, and when I left, both my patient and myself were under " the impression that the tumour continued decreasing, though " slowly."

Case VI.—A lady 45 years old, had had a child 24 years before. Catamenia had been pretty regular, but lately had taken the character of metrorrhagia. A tumour existed on the left side of the abdomen, quite low down in the pelvis, of the size of a cocoa-nut, painless, dense, and giving to the hand a feeling of obscure fluctuation. It gave the impression of a cyst with thick walls and thickish contents. Electricity was applied as in the other cases, but no effect was noticed.

Whenever two needles connected with the poles of a battery are introduced into a solution of salts, into any liquid that contains albumen, or tumour filled with liquid, a decomposition takes place. At the positive pole oxygen is eliminated,acids are formed, albumen and fibrin collect, coagulation occurs ; while hydrogen, alkaline bases, colouring matters, &c., go to the negative pole. All substances which contain water are good *electrolytes*, *i.e.*,

are liable to be decomposed by electricity. The same process may be effected by introducing but one pole into the liquid, and closing the circuit, by placing the other pole on the surface of the body. Nay, even when neither of the poles is introduced but both are applied to the surface of the body, electrolytic effects may be obtained. This is termed the "percutan method."

Under electrolysis in the ovarian cyst, something must take place like that which occurs in an albuminous fluid by the introduction of both poles. The liquid is resolved, and the wall of the cyst undergoes such a change that further secretion is brought to a stand still.

Electrolysis is always a slow process, and when performed in the manner first described, by introducing both poles, and the application of a strong current, is a very painful method, necessitating chloroform narcosis. It is in this way Dr. Cutler treats uterine fibromas. Dr. S. always uses mild currents, and his patients have never experienced any inconvenience,nor have they been chloroformed or confined to bed. Galvano-caustic effects were always avoided, if possible. Carbon and zinc batteries, and copper and zinc batteries were used, and in all instances, the constant current was employed.

In cases I, II, III, IV and V., both needles were introduced sometimes, but generally only one. The applications were made daily, and lasted from 5″ to 10″. It is still questionable, and to be determined by further experience, which battery, and the introduction of which pole,in a particular case, will give the best results, as well as which class of tumours is most favorable for electrolytic treatment. Dr. S. states that the fear of the frequent punctures producing adhesions, and so complicating the case if ovariotomy should be required, is, in his experience, groundless. He advises in cases of uterine fibroma to apply mild, constant currents, for a couple of hours or more every day, by the introduction of one pole into the womb or cervix, and the other into the tumour: and even percutan electrolysis might be tried before any painful application is resorted to.

A new method of Local Anæsthesia.—When Richardson's apparatus with sulphuric ether is used for the production of local anæsthesia, after a few moments there is observed redness and a sensation of cold, but never a sensation of burning or smarting.

If now there be made with a convex-shaped bistoury on the portion of integument submitted to the spray and become red, at the level of the hyperæmic region, a very light incision $\frac{1}{3}$ to $\frac{3}{4}$ of an inch long and involving only the epidermis and the superficial network of vessels of the skin—as soon as this incision is made there appears suddenly, starting from the point where the bistoury entered, an anæmic zone of the integument which continues to increase in size: if the ether spray be continued some seconds longer this region becomes exsanguine and its complete, absolute, anæsthesia is obtained. The bloodless tissues thus rendered void of feeling look, on section, like butter; they have lost their elasticity and instead seem sodden like soaked mill-board or solid fat. Around the whitened circle is seen another zone whose anæmia is not so marked—a kind of intermediate condition and ready to become very quickly reduced to the same ischæmic state as the central region.—In fact it is enough to direct the irrigation of the ether upon the zone in a circle to observe the absolute anæmia and anæsthesia which immediately follow it—we can thus enlarge and extend the anæmic area in any direction—it may be made to pass round the arm, to pass up as high as the shoulder or as low as the forearm. If the irrigation be suspended, these effects pass rapidly off; but the tissues remain under its influence for a certain length of time, so that, if some seconds after the anæmic effect has disappeared, we throw another jet of ether-spray upon either the part primarily anæsthetized or that going round it, a new anæmic space is produced without the necessity of making another new incision.

M. Cardinal has performed in the laboratory of M. Vulpian the same experiments as M. Letamendi and with similar results. Care must be taken to use very pure sulphuric ether, and also to shave the parts to be rendered insensible, because this anæs-

thetic ischæmia does not develop itself in parts which are covered with hair.—(Archives de physiologie, Avril, 1875.)—*Bulletin Général de Thérapeutique*, 30 *Mars*, 1876.

Statistics of 923 cases of Trephining.—Dr. Bluhm, in a series of articles published in Langenbeck's Archives, analyses 923 cases of trephining which he has collected. The following is a synopsis of the results:—Of the 923 cases in which trephining was performed for injuries to the skull, 450 recovered and 473 died (51.75 p. c); 297 of these 923 cases were gunshot injuries, of which 143 recovered and 154 died (51.55 p. c.); so that there remain 626 cases of simple injury to the skull, of which 307 recovered and 319 died (51.96 p. c.)

General Results.—Of 114 primary operations, 51 recovered and 63 died (55.26 p. c.)

Of 158 secondary operations, 94 recovered and 64 died (39.24 p. c.)

Of 59 cases where the operation was performed late, 3 ended favourably and 20 unfavourably (33.90 p. c.)

Of 592 cases in which the time of trephining was not specified 266 recovered and 326 died (55.07 p. c.)

I. *Contusion of Skull*—75 cases trephined; 36 recovered and 39 died (52.00 p. c.)

II. *Fissure of the skull*—11 cases trephined; 7 recovered and 4 died (36.36 p.c.)

III. *Separation of the Sutures*—8 cases; all recovered.

IV. *Simple fracture of the skull*—709 cases; 357 recovered and 352 died (49.65 p. c.)

V. *Wounds of the bones of the skull*—44 cases trephined; 27 recovered and 17 died (38.82 p. c.)

A. *Caries of the skull*—6 cases trephined; all ended favourably.

B. *Pott's Puffy Tumour* occurred only in 3 cases of the 923 which were trephined, proving fatal in two.

C. *Compression of the Brain from depressed bone, foreign bodies and Hyperostosis*—311 cases were trephined, with 163 recoveries and 148 deaths (47.59 p. c.)

D. *Compression of the Brain from Traumatic blood extravasation*—59 cases trephined; 44 recovered and 15 died (25.44 p. c.)

E. *Bruising of the Brain*—23 cases trephined, with only 6 recoveries; a mortality of 73.91 p. c.

F. In two cases of wound of the brain from a sharp instrument one recovered and one died.

G. Traumatic Meningitis and Encephalitis, as well as irritation from splinters of bone and foreign bodies—101 cases were trephined, with 51 deaths (50.50 p. c.)

H. A case of *Concussion of the Brain* which occurred in a case of fracture of the skull with depression after gunshot wound, and in which trephining was performed, recovered.

I. Eight cases of true brain contusion which were trephined all proved fatal.

K. In 44 cases of *abscess of the brain* in which trephining was performed, the result was much better, as *half* recovered.

L. In three cases trephined for contusion of the skull, *epilepsy* came on later, but all three cases terminated favourably.

Trephining.	Mortality in General Injuries.	Mortality in Gunshot Injuries to Skull.
Primary	55.26 p.c.	64.29 p.c.
Secondary	39.24 p.c.	42.86 p.c.
Late	33.90 p.c.	11.11 p.c.

Thus we see that *Primary Trephining* was less favorable than *Secondary*, and Secondary than *Late*; also Primary and Secondary Trephining are more unfavourable in gunshot wounds than general injuries, but *Late* Trephining is more favourable in gunshot injuries than in general.—By Dr. Bluhm, (*Archiv. f. Chirurg. v. Langenbeck, Band* 19, *Hft.* 3, *p.* 453.)

Onychia Maligna Cured by Nitrate of Lead.—Donati describes three cases of the above disease which were cured by nitrate of lead. This mode of treatment first became known in Italy by a monograph of Vanzetti's. The first to employ the remedy was De Moerloose. Lemaitre also advised it.

Case I.—E. Z., aged 6 years, formerly suffered from a pus-

tular eruption and enlarged glands ; at present the submaxillary glands are swollen and she has a scrofulous appearance. For two years she has had ulceration about the nail of the middle finger of the left hand. The affected phalanx was thickened, dark red and club-shaped. The matrix of the nail was ulcerated. The ulcer was of a dirty grey color and discharged a bloody fœtid pus ; it had sharply-cut edges of a *bacony* appearance. The nail was short, soft, of a dirty grey color, raised and quite loose. The whole finger was very painful. The nail was cut short and pulled out by the roots, and the ulcer covered with powdered *nitrate of lead;* this caused great pain for about four hours, when the pain suddenly ceased and the great tenderness of the finger disappeared. The swelling of the finger gradually lessened, and the ulcer soon healed. Two months later a new nail began to appear, and the finger was painless and nearly normal in size. One year after the finger was compared with the corresponding finger of the other hand and was found still somewhat thicker and redder than normal, but painless. A new nail had formed which was regular and convex, and only slightly raised from the end of the finger.

Case II.—H. St. ——, aged two years, no trace of scrofula. According to the mother, the end of the middle finger of the right hand was swollen in March, 1874, and in April an ulcer formed. The matrix of the nail presented a suppurating fœtid surface. The ulcer, which bled easily, had sharply cut edges ; the nail was thin, short, very loose, and of a brown color ; the end of the finger was club-shaped, thickened, of a reddish brown color and very painful. The nail was cut away to the root and the ulcer covered with powdered nitrate of lead. There was great pain for an hour, and from that time the pain ceased and the finger improved. In seven days the scab fell off, and after thirteen days the ulcer was much smaller, the swelling of the finger had gone down considerably and the nail was beginning to grow. The nail was cut afresh and nitrate of lead reapplied. This time the application caused much less pain. In three months there was no trace of the ulcer, and in its place was a grey crust ; the swelling had entirely disappeared and the finger was painless.

Case III.—A—— G——, aged 3½ years, of a healthy, strong appearance, had run a splinter under the nail of the little finger of the right hand eighteen months ago. A year ago the splinter had been extracted, and from that time the finger became troublesome. The pain, which at first was great, had gradually lessened, but had again increased. On examination the phalanx was found to be club-shaped and about three times its natural size; the matrix and neighbouring parts were changed into a very fœtid ulcer of a dirty grey colour, the edges of which were sharply cut. The nail was short and blackish, and the ulcer bled easily. The second phalanx was red, swollen, and painful on the slightest movement. The nail was removed and powdered lead applied. After two hours of severe pain the finger was much easier, and the patient passed a quiet night. After 26 hours the swelling had diminished a good deal. The powdered nitrate of lead was applied again, and on the 4th of June the finger had returned to its normal size, but was still a little red, though painless; the matrix was covered with a dry crust and the nail had grown again, but was raised and loose. The nail was again removed without bleeding, the wound cleaned and a thin layer of nitrate of lead applied, all this without the slightest pain. On the 5th July the finger was completely cured, and a new nail was half grown and healthy.

These three cases bring the number of reported cases cured by nitrate of lead up to 35.—*Donati in Annal. Univ. Vol.* 233. *P.* 121, *quoted in Schmidt's Jahrbucher.*

On the Treatment of Puerperal Convulsions.—Fehling, in a paper read before the Obstetrical Society of Leipzig (Arch. für Gynæcologie Bd. ix. Hft. ii.) favours what is termed the "aggressive method" in the treatment of this serious complication. Apart from the various hypotheses, the main point in convulsions is an increase in the arterial blood-pressure, which causes the general symptoms, especially the seizure, sopor, &c. Against this our therapeutic efforts must (in the first place) be directed. The administration

of chloroform is advisable, as it reduces the pressure. Opium and morphia increase the hyperæmia of the brain, and so are contra-indicated. Venesection reduces powerfully the pressure, still its action is transitory. As the most rational method, he recommends early delivery, even in the first stage, and in threatening cases with sacrifice, if need be, of the child. The fear of exciting fresh attacks by the passage of the hand or instruments is ungrounded. Of 11 cases, 10 were delivered as early as possible in the first stage of labor, some after free incision into the cervix; the mothers all recovered, of the children three died (two were perforated). One case treated expectantly died. The mortality by this method was only 9 per cent., against 35 per cent. recorded by Winckel in the "Pathology of Childbed."

Employment of Warmth for Menorrhagia.—A woman was admitted into the Hotel Dieu suffering from severe menorrhagia. An examination of the uterus gave no explanation of its cause. After sulphate of quinine and counter-irritants, as well as cauterization of the cervical canal, had been employed without effect, an india rubber bag filled with warm water as hot as the part could bear, was applied over the lumbar region and filled and reapplied every three hours. The next day the hemorrhage had diminished considerably, and the day after it ceased altogether. During the time the warmth was applied, the pain in the back, which had been severe, was much lessened. In four weeks the menorrhagia again appeared and warmth was again applied, with the same favourable result, the menorrhagia ceasing in 36 hours.

The same method was applied with a like good effect in a young woman aged 21, who for the previous ten days had had severe flooding, during which numerous large coagula came away, probably the result of a previous abortion, judging from the increased volume of the uterus and the patency of the os uteri. The flooding ceased completely in two days after the application of the warmth.—*By Guéneau de Mussy (Gaz. des Hôp.* 136. 1575), *quoted in Schmidt's Jahrbucher.*

CANADA

Medical and Surgical Journal.

MONTREAL, JULY, 1876.

THE DUTY OF PUBLISHING OBSERVATIONS.

We commenced this publication with a view of affording to the profession in this country a medium of communicating their ideas, and recording their observations in all matters of medical and surgical interest; and we must say that our efforts have been seconded by many workers. But while there have been given to us for publication many important communications, many of singular interest, and of practical value, we cannot but feel that in this respect we fall far short of similar periodicals in other countries. This does not proceed from a lack of interest on the part of the profession, nor is it from a want of educational advantages, but simply from an apparent diffidence, or fear of that keen criticism which to most men is objectionable.

That our fellow practitioners have nothing to say on the subjects of medicine and surgery we cannot believe, as we know that there are many original thinkers amongst us, many searchers after truth, many who are not held by doctrine or bound down by routine; many who carve out a way for themselves, and many who are fully alive to the importance of acquiring a knowledge of nature's laws. It is hardly necessary to urge on our readers the value of observations, carefully and regularly made. Every conscientious man, in active practice, becomes impressed with the serious nature of his calling, and of the great responsibility attached to it, and will by carefully recording facts, trace the course of events in each case. It is true some men trust to their memories alone, and keep no written memoranda. But while observation becomes a necessity, a record of these obser-

vations is a duty we owe to ourselves, if not to those under our charge. In reporting cases it is advisable that the observer's own conclusions drawn from the facts of the case should be stated. In most reports with which we have been favoured, a bare statement of facts has been made, and no inference drawn, and the reader is left to work out a theory of his own. This is much to be regretted, as the thoughts and opinions, the suppositions and beliefs of every man, be they even erroneous, are of value. Our columns will always be open to the thoughts and opinions of our professional friends, and communications of a practical nature will be specially welcomed. Hitherto our selections have been drawn solely from British and American sources. For the future we shall be able, in addition, to give our readers careful translations from the best continental journals. We sincerely thank our old subscribers and contributors for friendly help so cheerfully given to this journal in the time past, and we trust our efforts to improve the CANADA MEDICAL AND SURGICAL JOURNAL will be seconded by the profession throughout the country.

McGILL UNIVERSITY GRADUATES' ASSOCIATION.

The relations between a University and her Graduates, and the mutual claims of the one upon the other, are too often either forgotten or ignored. While it is the duty of the former to maintain a standard of education as high as possible under the circumstances, it is incumbent upon the latter to render every assistance in their power, individually and collectively, to enable the University to accomplish her work. More especially is this the case with the Alumni of McGill University, an Institution insufficiently endowed, without Government support, and relying mainly on the personal efforts of her friends to meet the increasing educational wants of this country. Most men, however, having finished their academical course, take but a passing interest in the affairs of the Alma Mater. Other matters absorb their time and atention, and though they may be glad to hear of her success, they do not consider themselves bound to active exertion on her behalf.

It is to remedy such a state of affairs, and to impress Graduates with a proper sense of their responsibility that an Alumni Association in connection with McGill University has been reorganized. The objects aimed at by the Association, and set forth in the constitution are "to bind the Graduates more closely to each other, and to their Alma Mater, and to afford them the means by united effort of more effectually promoting the interests of the University." In order to be successful, the active coöperation of the Graduates throughout the country must be obtained, and we here call upon the medical alumni to respond to the invitation shortly to be issued, and join the Association.

During the 45 years which the Medical Faculty of McGill University has been in existence, nearly 800 men have received their professional education, and gone forth to practice with her credentials. No doubt a large proportion of the success of the School is to be attributed to the fact that these Graduates carried away with them the belief that the gentlemen composing the Faculty were thoroughly in earnest, and anxious to advance the standard of Medical education. On this account they sent their students, and recommended the Institution to their friends. Something more is needed and may reasonably be expected. Every Graduate should feel that a way is open to him for the expression of opinion on matters of importance to the University, and this can only be effected by an Association such as is in processs of organization. Through it reforms may be brought about which might otherwise be impossible. We consider it quite within the province of such an association to discuss freely the condition of any department or chair in the University which may not seem to be in a satisfactory state. A recommendation coming from a large body of Graduates could not fail to receive proper attention from the authorities, and, indeed, might sometimes,in a matter of internal reform, relieve them from the duty—often painful—of taking the initiative. In the appointment to vacancies which from time to time arise, the Graduates may make their influence felt, as was illustrated so beneficially last year in the case of our sister University in the West. Nothing, we are convinced, would tend more to the advancement of the

interests of McGill University than the combination of her Graduates into an energetic Association, which would not only afford them an opportunity of social intercourse, but also a common platform upon which matters relating to the welfare of the University might be discussed. We give the constitution of the Society below:

GRADUATES' SOCIETY.

The following draft of a proposed Constitution of a Graduates' Society has been handed to us for publication:

1. This Society shall be known as the Graduates' Society of McGill University.

2. It shall be composed of all Graduates who shall pay an annual subscription of one dollar.

3. The object of the Society shall be to blend the Graduates more closely to each other, and to their Alma Mater; and to afford them the means by united effort of more effectually promoting the interests of the University.

4. The officers of this Society shall be a President, three Vice-Presidents, a Secretary, a Treasurer and six councillors, who shall be elected by ballot at each annual meeting, and shall form the executive of the Society.

5. The annual meeting shall he held on the evening preceding the Arts convocation.

6. The General meetings of the Society may be called by the Secretary on the requisition of the President, or any three members of the Executive Committee, or any ten members of the Society.

7. Fifteen shall form a quorum of the Society and five a quorum of the Executive Committee.

8. The constitution cannot be amended except by a two-thirds vote at an annual meeting. The usual by-laws and rules of order were also submitted and received.

The committee having taken into consideration the working of the Society and the most effectual means by which its objects might be attained, recommended:

1st. That under the auspices of the Society, an entertainment commemorative of its founder be held each year at a date as near as may be found convenient to the anniversary of his birth; to which the friends of the University shall be invited.

2nd. That with a view to giving members the opportunity of discussing University topics in a social manner, a dinner be held annually on or about the date of the Arts convocation.

3rd. That the selection of representative fellows from the several Faculties be considered at the annual meeting.

4th. That public exercises of a character, which at the discretion of the Executive, may be varied from time to time, form a portion of the proceedings at each annual gathering

Personal.

Frank Buller, M.D., M.R.C.S., Eng., late Resident Surgeon to the Royal London Ophthalmic Hospital, has been appointed Oculist and Aurist to the Montreal General Hospital.

Alexander Proudfoot, M D., has been appointed Oculist and Aurist to the Montreal Dispensary.

R. L. Macdonnell, B.A., M.D., and W. A. Molson, B.A., M.D., have been appointed Assistant Demonstrators of Anatomy in the University of McGill College.

Wolfred Nelson, M D., and J. B. MacConnell, M.D., have been appointed Physicians to the Montreal Dispensary.

The following McGill graduates are pursuing their medical studies in London:—W. A. Molson, B.A., ('74), H. L. Gilbert ('75), W. F. Scott, ('75), J. L. Ritchie, ('74), R. L. Macdonnell, B.A., A. F. Ritchie, B.A., C. F. Murray, B.A., H. L. Reddy, B.A., A. Munro and A. Storrs, of '76.

J. W. Whiteford, M.D. ('73), has moved from Belleville to Ottawa, where he has commenced practice.

W. T. Ward, M.D. ('73), returned to Canada for a short visit last month. He has been for some time past Surgeon on the Brazilian Mail Line of steamers.

H. W. Coyle, M.D. ('76), has begun practice at Sorel.

Reuben Levi. M.D. ('76), is practising at Inverness, P.Q.

Jas. M. Nelles, M.D. ('75), and F. G. Clarke, M.D. ('76), are practising together in Chicago.

C. M. Lang, M.D. ('76), is practising at Owen Sound.

Dr. Bovell, of Toronto, has returned to the West Indies.

Andrew Speer, M.D. ('74), is practising at Danville, P.Q.

Dr. Davignon ('71), who is practising at North Adams, Mass., was in town last week.

We are sorry to chronicle the death of Dr. Grenier, the late Editor of the *Union Medicale du Canada*. We need hardly say that the editorial remarks in our last number were printed before we were acquainted with the serious illness of this gentleman.

CANADA

MEDICAL & SURGICAL JOURNAL

Original Communications.

NOTES OF ABNORMALITIES,

Observed in the Dissecting Room of McGill University during the Winter Session of 1875-'76.

By Francis J. Shepherd, M.D., M.R.C.S., Eng.

Demonstrator of Anatomy.

The following notes were taken on the spot during the last winter's session, from 36 bodies dissected. As some of the cases are rather unusual I thought the following short paper might prove acceptable to those of your readers who take an interest in Anatomy. I do not pretend to describe *all* the variations which occurred, but only those which attracted most attention at the time.

Osseous System.—We had one subject, (a squaw), in which there were three floating ribs on each side.

Muscular System.—One example of the posterior belly of the digastric and the stylo-hyoid muscle passing under cover of the external carotid artery. This occurred on both sides of the same subject. The stylo-hyoid muscle passing between the external and internal carotid is of no very great rarity, although I see mentioned in the Guy's Hospital Reports for 1868, in the article on '*Anatomical Abnormalities*,' that it did not occur once in 158 cases. I have never seen a case of the posterior belly of the digastric passing under cover of the external carotid recorded. In this subject the course of the external carotid

was very superficial, in consequence of the variation. I found that the pectoralis minor arose nearly as often from the second, third and fourth ribs as from the third, fourth and fifth, and that the coraco-brachialis muscle was only perforated by the musculo-cutaneous nerve in about two-thirds of the cases. No case of abnormality of the muscles of the back or face was noticed, these muscles usually being most regular. We had, however, one subject, (a Frenchman), in which the muscles of the face were developed in an extraordinary manner, so as to be easily dissected out by a first year student. In this subject the platysma myoides was nearly as strongly developed as the corresponding muscle in the horse. We had three examples of the biceps brachii arising by three heads, all occurring on the right side. In two of the cases the third head arose just below the insertion of the coraco-brachialis; in the third case, it arose between the two fleshy digitations of the brachialis anticus muscle. In another case there was a slip given off from the biceps which joined the pronator radii teres muscle; this slip gave origin to the greater part of the bicipital fascia. There was one example of an extra secundi internodii pollicis arising from the radius opposite the origin of the proper secundi internodii pollicis. In this subject the origin of the extensor indicis was much more extensive than usual. One example of a slip of muscle being given off from the extensor ossis metacarpi pollicis, and joining the abductor pollicis. We had one case in which the palmaris longus was absent. Absence of the gemellus superior *on both sides* in one subject. In one subject the gastrocnemius muscle of left leg was most extraordinary in having its external head *completely wanting.*

I am indebted to Mr. W. G. Robinson for the sketch from which the accompanying wood cut is taken.

This occurred in a female. On dissecting off the integument and fascia of the left leg, the first thing that came into view was the little plantaris muscle. The usual point of origin of the outer head of the gastrocnemius was quite bare, the bone merely being covered by a little fat. The internal head was of the usual size. I have nowhere seen a case of this kind recorded in any of the works I have consulted, and I believe the case to be quite unique. The muscles of the shoulder and hip were found to be quite normal in all the subjects dissected.

In one subject there was a separation of about two inches at the insertion of the two recti abdominis muscles. They commenced to separate about the umbilicus. There were two examples of absence of the plantaris muscle, in each case occurring on the left side.

Arterial System.—We had one example of the superior laryngeal artery arising directly from the external carotid instead of from the superior thyroid; it was about twice the usual size. The arch of the aorta was abnormal in one case only. In this case the left vertebral artery was given off directly from the arch. In the same body there was a thyroidea ima artery given off from the innominate.

There were four examples of high division of the brachial artery, all occurring on one side of the body only. In Nos. 1 and 2, the division took place just below the insertion of the deltoid muscle. In case No. 3, the division occurred in the latissimus dorsi muscle. The branch on the radial side afterwards became the ulnar by crossing the radial about the bend of the elbow, and then continued on as usual. In case No. 4 the artery given off on the ulnar side afterwards became the radial by crossing the ulnar just above the bend of the elbow. In this case the radial recurrent artery was given off from the ulnar. We had one low division of the brachial, the division taking place at the lower border of the pronator radii teres muscle. In this case the ulnar artery was quite superficial throughout its whole course, and the inter-osseous, radial and ulnar recurrent arteries were given off from the brachial. There was one example of a large median artery being given off from the brachial and

accompanying the median nerve, supplying the same number of fingers ($3\frac{1}{2}$) as the median nerve, and taking the place of the ulnar in forming the superficial palmar arch ; the ulnar artery in this case was smaller than usual, and accompanied the ulnar nerve, supplying the little finger and half the ring finger like it. The deep branch of the ulnar communicating with the deep palmar arch was given off as usual. This peculiar distribution of the arteries of the forearm and hand occurred on both sides in the same body. We had three examples of the obturator artery being given off from the deep epigastric. Two occurred on the right side and one on the left. The obturator artery in all three cases passed to the outer side of the femoral ring. In one case the obturator artery gave off a very large pubic branch ; all three examples occurred in females. In four cases the external circumflex artery was given off from the superficial instead of the deep femoral, three cases occurred on one side only. There was one example of the peroneal artery forming the dorsalis pedis, and to a certain extent taking the place of the anterior tibial. This peroneal artery was of large size, and after supplying the peroneal muscles it pierced the inter-osseous membrane and appeared on the front of the leg between the extensor proprius pollicis and extensor longus digitorum muscles, continuing on as the dorsalis pedis artery. In this case there was a small anterior tibial artery which supplied the anterior tibial muscles, and ended a little below the middle of the leg.

Nervous System.—There were two cases where the musculo-cutaneous nerve was given off from the median below the insertion of the coraco-brachialis, this muscle being supplied in the one case by a few filaments from the outer head of the median, and in the other by a special branch from the outer cord of the brachial plexus given off high up. In both cases the brachialis anticus and biceps muscles were supplied by the musculo-cutaneous nerve, as usual. There were two examples of the median nerve passing behind the brachial artery. There were seven cases where the great sciatic nerve divided high up ; in all these cases the external popliteal nerve pierced the pyrifor-

mis muscle. Three of these cases occurred in both sides of the same body.

Internal Organs. — No great abnormalities. There was one case of horse-shoe kidney, which has already been described in the June number of this Journal. There were two examples of the descending colon having a meso-colon; in one case this meso-colon was about 1½ inches long, and in the other (a squaw) the meso-colon was 3½ inches; in this case the descending colon was about ten inches longer than usual. In both these cases the peritoneum would have been wounded in the operation of colotomy.

In three subjects, (females) the sigmoid flexure of the colon was continued across, from about the middle of the iliac fossa on the left side, to the sacro-iliac synchondrosis of the right side where the rectum commenced, and was normal for the rest of its extent, going from right to left, however, instead of from left to right. In two of these cases the lower transverse colon was two feet long. Several cases in which there was a meso-rectum were also noticed.

ACUTE ARTICULAR RHEUMATISM,

Treated by Salicylic Acid,—By Dr. H. C. Burritt.

J. D., aged 40 years, a farmer residing 5 miles from town, was attacked with acute articular rheumatism on the 10th of May last. I first visited him on the 13th. At this time the disease had involved the ankles, knees, hips and right arm and hand. The joints were hot, swollen, tender, and exceedingly painful. He was perspiring profusely, perspiration acid, pulse 114, temperature 103°, tongue thickly coated, urine scanty and very high colored, and throwing down a large quantity of lithates; bowels constipated. Having noticed in all the cases which I saw reported of the use of salicylic acid in this disease, that the relief produced by it was something extraordinary, and being somewhat doubtful of it, I resolved now to test its efficacy for myself.

At 3 p. m., during my first visit, I administered gr. x. sal-

icylic acid. (Kenneth Campbell and Co's preparation), and ordered the dose to be repeated at 4 p. m. and then every two hours, until the pains were partially relieved, when an interval of 4 hours was to be left between the doses. I ordered also an enema for the bowels, and milk diet. The medicine was administered regularly until 10 o'clock of the same night, when the patient refused to take any more, as he thought he was perspiring too freely, and the pains were not so severe. He could not be prevailed upon by the nurse (his brother) to resume the medicine until 5 o'clock the next morning. After this the powders were given every 4 hours until I saw him at 3 p. m. on the 14th, twenty four hours from the administration of the first dose of medicine.

I found him lying on his side, in which position he had placed himself without assistance, and from which he turned when I entered the room. The pains and tenderness had entirely subsided, but the joints felt stiff. He was still perspiring profusely, the pulse was 80, (34 less than the day previous) ; the temperature 99°, (a difference of 4° from previous day) ; tongue cleaning and moist ; urine not so scanty or dark, still heavily loaded; bowels had moved twice with the enema. Ordered the powders to be continund every 4 hours for the next 24 hours, then every 6 hours. I did not visit him again, but had reports from him each day. He was out of bed and able to walk about the room on the 17th, went down stairs on the 18th, was out of doors on the 20th, and walked about half a mile on the 21st. Ten days from the time I first visited him he was in my office in town. There has been no tendency to a return of the disease, and no ill effects have remained, or were produced by the medicine. There was no other medicine used while using the salicylic acid. It was continued for three days after my second visit, every 4 hours during the first, every 6 hours during the second, and every 8 hours during the third. On the fourth day after my second visit I prescribed a tonic of iron and quinine, which was continued for about a week. The mode of administration which I adopted was to mix the powder in oatmeal gruel. This succeeded admirably in preventing any

irritation of the mouth or throat. There were no local applications used.

In this case, (which was one of average severity), the disease was arrested in less than 24 hours from the time of the first administration of salicylic acid, with about 80 grains of the medicine and completely annihilated in 4 days with about 220 grains. I trust that if such satisfactory results can be obtained from this drug, that it will be brought into more general use before long. Judging from the results given in all the reported cases which I have seen, and the most satisfactory termination of my own case, it seems to me that salicylic acid in the treatment of acute inflammatory rheumatism, possesses the following advantages *over any other* plan of treatment that I have ever seen adopted.

First.—It arrests the progress of the disease and gives permanent relief from pain, tenderness, &c., in a much shorter time.

Second.—If used early before any cardiac complication exists, it will by its prompt arrest of the disease, prevent the occurrence of such complications, and the consequent development of *organic* disease of the heart in many cases.

Third.—It does away with the necessity for using any local application.

Fourth.—No ill effects have as yet been known to follow its proper administration.

The irritation of the mouth and throat produced by it is rather a disadvantage, nor do I think that this would be over come, in many cases, by the use of capsules or wafer paper, as the majority of patients have a great antipathy to swallowing bulky substances, and particularly where they have to be used frequently. I found the thin gruel answer very well, and I think it will be found to do so in most cases, until some solvent is discovered, which will enable us to administer it in solution, in less bulk than any of those so far recommended. There are several mentioned in "The Druggist's Circular," for July, but there are objections to them.

PETERBORO, Ont. July 10th, 1876.

CASE OF CEREBRAL ANEURISM.

By John Bell, A.M., M.D.

On the morning of May 29th Mrs. R. was found by her children lying speechless in bed. She was 40 years old, was married at 21, and had borne five children, the youngest of whom is now 15. She was of medium height and rather thin. It was said that she was sometimes abused by her husband, who beat her about the head, and finally left her to earn a living by washing. She was rather peculiar in her habits, often doing little during the day, and then sitting up till two in the morning to finish her work. She occasionally suffered from vertigo,—a very severe attack seizing her on rising from the wash tub about two weeks before her death. Her sight left her for the time, and she afterwards complained of her head aching as if some one were pounding it. Her memory was very bad. She frequently was unable to recollect where she had left things. I found out after her death that for about a year she had been very deaf, and that her hearing had become much worse during the last two weeks of her life. She was not very strong, but had never suffered from any acute illness. She was a very temperate woman.

Seeing her about 8 a.m., I found her lying rigidly extended on her back with her arms at her sides, and the thumbs strongly flexed across the palms. Her countenance bore a stupid staring expression, and the pupils were moderately dilated and of equal size. The conjunctivæ were not sensitive on being touched. The thoracic, abdominal and pelvic organs were all healthy as far as could be made out.

After administering a dose of potass. bromid. and ext. valerian. fid. and rousing her up, she seemed slightly conscious on being spoken to, and the pupils were then sensitive to light. During the day she became still more conscious, and her eyes followed those moving about the room. She passed water freely, and her bowels moved from the effects of a dose of croton oil. Ice had been applied to her head, and bottles of warm water to her feet, which had now become very warm.

In the evening she became worse, and more insensible,

twitching and moving in a restless manner. The same treatment was continued, with the addition of ext. ergot. fld. to the mixture. Her urine was drawn off by catheter and examined, but contained no albumen. She slept or dozed for considerable intervals during the night and until her death. On Sunday the 28th she had complained of headache, and was more nervous than usual.

The next forenoon, 30th, she seemed better than she had been the previous evening, but was utterly unable to speak. Her left arm and leg were found to be completely paralysed, and later in the day became quite dark in color. She was unable to close the right eye.

She took beef tea and milk in small quantities, and was ordered to have brandy if there were any signs of sinking. In the evening she became decidedly comatose, with bellows breathing and accumulation of mucus in the larynx and trachea. There were now no convulsive movements. She died at 11.30 p.m. on the 30th.

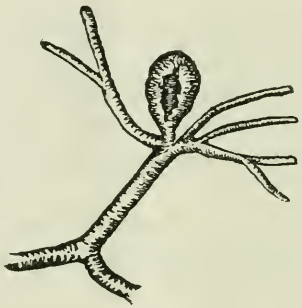
It was thought that an extravasation of blood had taken place in the anterior portion of the right hemisphere.

Post mortem, by Dr. Osler 11 hours after death.

Body that of an average sized poorly nourished woman.

Head.—Nothing special noticeable about the soft parts or the calvarium. Veins of the pia mater moderately full of blood; subarachnoid fluid scanty. In the removal of the brain, clots were met with in the neighbourhood of the middle fossa of the base of the skull on the right side, and they were seen to have proceeded from a large extravasation which had taken place in the right Sylvian fissure. The convolutions of the middle lobe in the vicinity were considerably lacerated, the brain tissue broken down and replaced by a dark clot. About a handful of coagulated blood was removed, most of which was in and about the Sylvian fissure. Only a thin layer of blood existed in the base, around the optic commissure and perforated spaces. A delicate coagulum also extended over the convolutions in the lateral region on the right side. The circle of Willis and middle cerebral artery were removed for subsequent examination. The sub-

stance of the brain appeared healthy ; the ventricles were empty, and nothing abnormal was observed about the ganglia at the base. On carefully washing away the clots from the right middle cerebral artery, the source of the hæmorrhage was ascertained to be a small aneurism, situated in the fork of the chief bifurcation of the vessel. This had ruptured, and the blood had escaped through a large ragged orifice. The situation, size and appearance of the rupture are well shown in the annexed wood-cut. The remaining vessels of the brain were found healthy, no atheromatous change being detected in their walls.



Abdominal organs healthy ; no affection of the kidneys.

A beautiful false corpus luteum was found in the left ovary, (she had menstruated exactly three weeks before) measuring fully $\frac{7}{8}$ of an inch in diameter, and with a pale yellow convoluted wall. The central coagulum was of a dark red colour. In the same ovary at the other end was a small corpus luteum about $\frac{1}{3}$ the size of the large one, with a decolorized coagulum and much more convoluted wall.

Uterus somewhat enlarged. Mucous membrane appeared congested and tumefied.

Hospital Reports

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Acute General Tuberculosis, fatal by Meningitis.—Under DR. ROSS. Reported by MR. R. L. MACDONNELL, B.A.

S. B., æt. 14, was admitted into the Montreal General Hospital on the 5th August, 1875, under Dr. Ross. She is a strongly built girl, though small for her age, and has been for the last seven years an inmate of one of the charitable institutions of this city. Nothing could be learned of her family history.

Her illness began rather suddenly nine days ago, with fever and feeling of great weakness, together with great pain in the back. This was soon followed by vomiting, (easily however controlled), and some headache. She then became very restless, somewhat delirious at night, frequently waking sharply and giving a sudden loud scream. At the same time she complained of her back, and sometimes of her head. It was then noticed that she squinted. She was seen by Dr. Ross on the afternoon of the 5th, and was removed to hospital the same day.

Aug. 6th—She now lies in a drowsy condition. Can, however, be roused to partial consciousness by being spoken to. Head continually directed to the right side, and eyes half shut. There is decided strabismus and very frequent spasmodic movement of the right eye. Right pupil slightly more dilated than the left. Both act very sluggishly with light and oscillate considerably. Neck stiff, but no retraction of the head. If the head be moved she screams and cries out "Oh! my back." Pulse 68.

Ordered—Head to be shaved, bladders of ice to the head, the spinal ice-bag to be applied, and to take potass. iodid, gr. x. every four hours.

Aug. 7th.—Passed a bad night. Screamed a good deal. More drowsy. Drooping of right upper eye-lid. More dilatation of that pupil; that eye more stationary; pupils do not

act. Abdomen retracted. Cerebral maculæ of Trousseau particularly well marked. The ophthalmoscope showed all the retinal vessels intensely congested. Pulse in the morning, 68; in the afternoon 108. Temperature 101°.

Ordered. Calomel gr. v. to be followed by black draught.

Aug 8th.—Had two severe convulsions yesterday evening and to-day is profoundly insensible; marked ptosis on right side with corresponding pupil widely dilated. Pulse in the morning 104; temperature 100·6°, in the evening, pulse 128; temperature 101°.

Aug. 9th—Comatose and livid; noisy breathing; pulse 130; temperature 101.6°. Died this afternoon.

Post mortem.—Eighteen hours after death; vessels of scalp congested and bleed freely on being divided. Cerebral veins of the convexities gorged to their utmost extent with blood. Considerable effusion of serum beneath the arachnoid. At the base of the brain this membrane was found thickened and opaque. Similar patches of thickening, with slight deposit of lymph were also noticed along the line of some of the congestted vessels. The commissure of the optic nerves, and the roots of both third nerves were embedded in a deep mass of gelatinous lymphy deposit. It was thicker and more opaque over that of the left side. No distinct evidence of tubercle could be found in this region, but a quite decided granular condition of the vessels was noticed, especially at the inner extremity of and passing along the fissure of Sylvius. Puncta vasculosa numerous and distinct. Corpus callosum wanting in firmness. Fornix very much softened. Ventricles considerably distended and containing about 4 oz., of limpid serum. No signs of softening in any part of the ventricular walls. Choroid plexuses extremely congested, velum interpositum opaque and thickened, and dotted with minute specks of miliary tubercle. Spinal cord and its envelopes, normal, arachnoid especially being clear, transparent and unaffected. Heart and pericardium healthy. Pleuræ adherent at several points by fine bands, and their surfaces sparsely studded with a number of fine miliary tubercles, gray and hard. The lungs also contained in their substance a

small quantity of similar tubercles, which were found aggregated into a small mass at the apex of the left lung.

Miliary tubercles were also found in the capsules of the kidneys.

A few also existed in the structure of these organs, in the peritoneum, the surface of the liver and in the capsule of the spleen.

Case of Pneumonia with Acute Meningitis. — Under Dr. Reddy. Reported by Mr. James Bell.

H. F., aged 38, was admitted to Hospital, May 27th, under care of Dr. Reddy. He walked up stairs unaided, and quietly sat down and waited till his bed was prepared for him. He was very quiet all the afternoon, never speaking except when spoken to. He was first noticed to be delirious about 9 p.m., but the nurse thinks that he was not rational even when admitted. This being the case no reliable history of his attack could be got from him. The following facts, however, were subsequently elicited from his friends. That his wife died on the 15th of May. That there occurred at this time some domestic trouble, (nature unknown to the reporter), which seemed to cause him great annoyance. On the 17th he complained of pains in his right side and in his head, but worked on till Saturday night (20th inst). He was very bad on Sunday. The pain was very severe and he became delirious. He was very quiet throughout all his illness, but was never rational from Sunday the 21st. He was a steady, hard-working man, had been a file maker for the last six or seven years. At first Dr. Reddy looked upon the case as one of typhoid fever and ordered him two pints of milk daily. No medicine was ordered. He was watched on Saturday night by Mr. Gillies. At midnight his temperature was 103⅗°, pulse 104; respirations 34. Sunday morning, 8 a.m., pulse 100; respirations 32; temperature 102⅖°. During the day he remained quiet and apathetic, but still unable to give rational answers to questions put to him. About 9 p.m. he became quite delirious and wanted to get out of bed, &c. Mr. Smellie and myself sat up that night watching him. At 11.45 p.m., his temperature was 103⅗°, pulse

100. Dr. Burland ordered him quinæ sulph., gr, xv, which was given him at 12 m. We remained with him till 7 a.m. recording his pulse and temperature, every hour with the following results. At 1 a.m., (1 hour after taking the quinine), temperature 103°, pulse 105. 7 a.m., temperature 101⅖°; pulse 96; respirations 40. He did not sleep at all during the night, but was very quiet. When questioned his answers showed that his mind was wandering. He remained in the same condition during the day on Monday, but showed signs of increasing weakness, and was ordered 4 oz., of wine. No diarrhœa at any time. Temperature was not taken on Monday night.

Tuesday, May 30th.—General appearance just the same as on the last two days. He did not appear to have the characteristic languid look of a typhoid patient. At 10.15 a m. his temperature was 104⅘°. At 11.40 a.m. his temperature was 105⅕°. pulse 116; respirations 44. He was given fifteen grains of quinine at 12 m. At 1.30 p m. his temperature was 103⅘°. At 3.00 p.m. temperature 105°; pulse 118, weak and compressible. He was ordered six ounces of wine, and brandy if necessary. He became much weaker, and was given brandy and water from early in the afternoon. He was ordered to be sponged four times daily with water at 80° F. This was done. The nurse had difficulty in getting him to take his nourishment in the afternoon and evening. 8.30 p.m., temperature 105⅖°, pulse 120; respirations 50.

Wednesday, May 31st.—Died at 6.00 a.m.

June 1st, 1876.—*Post mortem.*—Rigor mortis found to a slight extent in the arms, more so in the legs. Body not emaciated, muscles moderately developed. Posterior surface of the body discolored.

Abdomen.—Position of the abdominal viscera normal. No fluid in the abdominal cavity.

Thorax.—Lungs very much pigmented. Upper lobe of left lung covers two-thirds of the pericardium, and is nearly in contact with the lung of the opposite side. No fluid in either pleural cavity.

Pericardium.—Thin and contains about ℥ii of fluid.

Heart.—Medium size. Moderate amount of fat about the base. An indistinct patch of attrition visible on the right ventricle. On removing the heart a considerable amount of dark fluid blood and a few clots escaped.

Right Ventricle contains a semi-colorless firm clot. Tricuspid orifice of normal size. Tricuspid valves healthy. One segment fenestrated.

Left Ventricle contains a few small clots ; one flat and extending slightly up into the left auricle.

Aortic Valves.—Slightly thickened at the corpora Arantii Segments also fenestrated.

Muscle of the heart of normal appearance.

Endocardium covering the *columnæ carneæ* somewhat cloudy.

Right lung—Adherent at the apex, and presents a number of cicatrices. Upper lobe, with the exception of the anterior and lower margin, in a condition of red hepatization, the cut surface presenting the usual appearance of that condition. The bronchial tubes of the hepatized area are filled with plugs of lymph, which look like small suppurating foci on superficial examination. The remainder of this lung, together with the whole of the left lung is in a state of engorgement, and collapse is evident over the lower lobe. Scattered over the surface of the pleuræ of both lungs, chiefly at the bases, are small white firm granules, feeling to the touch like small shot. These look very much like miliary granulations (?). Some of these, however, are flatter and not granular, and they may be simply fibroid thickenings of the pleuræ.

Left lung also slightly adherent at the apex and to a greater extent behind.

Spleen, 8½ oz. Soft. Pulp of a purplish-red color and semi-diffluent in character.

Kidneys. — Left kidney 5 oz. Capsule thin and readily detached. On section the organ contains a moderate amount of blood. Proportion between cortex and medulla, normal.

Right Kidney.—5½ oz. Similar characters to those of the left. At the lower part of one pyramid is a small, white firm nodule,

about the size of a pea. No miliary granulations over the surfaces.

Stomach.—Mucous membrane scattered over with branching red points. In places there are minute ecchymoses. Towards the pyloric end there is a patch where the mucous membrane appears infiltrated.

Intestines.—Mucous membrane of duodenum and jejunum healthy. In the ileum Peyer's glands are plainly marked, and pigmented at the bases. The villi in this region of the intestine look dark, probably due to fatty degeneration.

Liver 55 oz. Contains a considerable amount of blood. Otherwise normal.

Brain—48½ oz.

Surface of the brain.—Longitudinal sinus filled up with a thin layer of yellowish-white lymph. A similar condition exists in the Sylvian fissures. In the right Sylvian fissure the layer is very thick. A thick layer of the same character exists around the optic nerves, and extends over the perforated spaces to the pons, and on either side to the under surface of the middle lobe, continuing from this it extends as a thick layer posteriorly over the pons, medulla, and contiguous portions of the cerebellum. Extending laterally it lines the lower and anterior edges of the cerebellum as a thick greenish white layer. Behind the medulla a similar condition exists, and the lymph extends to the groove between the lobes of the posterior surface of the cerebellum.

Superior surface of the Brain. — Vessels of pia mater moderately full. A considerable amount of greenish-yellow lymph exists beneath the arachnoid of both anterior lobes. A slight amount is seen along the ventricles over the posterior surface. Over the convolutions of the left posterior lobe, a thin layer of extravasation exists. It is of a uniform dark-red colour, due to some effusion of blood from the vessels. On section the white substance is seen to be glistening and moist. Puncta vasculosa, moderately marked. Fornix and septum, exceedingly soft, and break down on attempting section. The ventricles contain a moderate amount of fluid. They appear slightly dis-

tended, and their walls are soft. Here and there in the course of the vessels small extravasations are met with. Small extravasations are also found along the vessels in the fourth ventricle. Velum interpositum involved in the inflammation, and is thick and greyish-yellow in colour. No trace of miliary tubercles to be seen on superficial examination, either about the base or along the vessels in the Sylvian fissures.

Reviews and Notices of Books.

A Treatise on the Diseases of the Nervous System. By Wm. A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System, in the Medical Department of the University of the city of New York, President of the New York Neurological Society, &c., &c., with one hundred and nine illustrations. Sixth edition, re-written, enlarged and improved. 8vo. pp. 883, New York, D. Appleton & Co., 1876.

The work of Professor Hammond, is so well known to the profession that it is quite unnecessary to enter into any detailed remarks on the contents. This is the sixth edition which has been called for, of itself a sufficient indication of the estimation in which it is held. This is not a mere reprint of former editions, for "it has been to a great extent re-written. There is not a chapter which has escaped extensive alterations and additions, and the amount of new matter is so great that the volume contains twice as much as any one of the previous issues. Besides the changes made in the chapters of the former editions, a number of diseases are now considered which were not embraced in the previous publications, and some of these are for the first time treated of in the English language."

A new feature of this edition is the introduction of a chapter upon that most interesting disease exophthalmic goître. The writer properly, we think, believes that this affection may rightly be claimed amongst the nervous affections.

The great merit of the entire work consists in the fact that it is in no sense a compilation, but is the systematized product of the author's own experience and observation. Thus every branch

of this important, and, at the same time, extensive subject is found enriched by the records of Dr. Hammond's own cases, and by the expression of his own decided views and opinions. In these latter, also, he is no servile follower of others, but evidently has thought earnestly and strongly for himself on every point, and not unfrequently arrives at conclusions which, at first sight may seem startling, because they are peculiar.

The entire volume is divided into five sections, as follows: Diseases of the Brain, Diseases of the Spinal Cord; Cerebro-spinal Diseases; Diseases of the Peripheral Nervous System; Toxic Diseases of the Nervous System.

The publishers' part has been well done, and the book presents a very neat appearance.

An Elementary Treatise on Diseases of the Skin. By HENRY G. PIFFARD, A.M., M.D., Professor of Dermatology, University of the city of New York. 8 vo. pp. 375: London and New York. Macmillan & Co. 1876.

This manual is specially designed "to provide for the student a guide to the study of elementary dermatology, and to afford the practitioner assistance in the recognition and treatment of cutaneous diseases." The author is thoroughly conversant with his subject, and has produced a good practical work, one which possesses many advantages over the text books of Wilson, Fox, and Neumann.

The arrangement is excellent, the chapters clearly written, not too long, and free from that tedious terminology which distracts the student, and makes him forswear the study of an exceedingly interesting department of medicine.

The work is embellished with some 50 woodcuts and 5 photo-micrographic plates. It seems ungracious not to speak favourably of a method which may eventually be of great service in illustration, but we do think that the latter would have been better omitted. For the purpose of instruction they are valueless.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

The abuse of Hypodermic Injections of Morphia.—Under this heading in Schmidt's Jahrbücher der Gesammten Medicin, Jahrgang, 1876, No. 1, are recorded nine cases illustrative of the evil effects which too often may be traced to the good-natured weakness of medical men, who yielding to the importunities of their suffering patients entrust them with an agent potent alike for good or evil. The temptation to make too liberal a use of a remedy which affords speedy and certain relief, soothes the pains, real or imaginary of the sufferer, quiets the anxieties of the friends, and saves the medical attendant from worry and annoyance, frequently requires more than ordinary fortitude for its successful resistance; but it is not only in private practice that we find this evil has taken root, for in many hospitals the hypodermic syringe and solution of morphia form the resident physician's inseparable companions; nor does he always stop to enquire whether the discomforts of those under his care could not be removed by some less objectionable means.

Although the habitual use of morphium may occasionally be attended with no serious mischief, such cases form the exception rather than the rule, for morphium like alcohol is prone to undermine the vital powers of those who become its slaves. Like alcohol, its long continued use weakens both body and mind, perverts the functions of the brain and nervous system generally, and in extreme instances gives rise to the same psychical phenomena as occur in cerebral paralysis.

1. A man æt. 45, became accustomed to the use of morphium injections for the relief of pain occasioned by an ulcer of the stomach. At the end of six months he was taking six to twelve injections daily. Each injection brought relief to the pain, but did not arrest the vomiting. The appetite had failed entirely, and sleep was almost out of the question. The countenance was pale and sodden; the body excessively emaciated. Periods of apathy and excitement alternated with each other, and walking

was rendered impossible by violent tremor, whenever it was attempted. Mental hallucination and dulness of intellect gave place to paroxysms of rage when the morphium was refused.

Chloral substituted for the morphium afforded only temporary relief, and soon had to be abandoned on account of the headache which it occasioned. Other soothing remedies were tried without benefit, and the injections were resumed, but from this time systematically reduced, so that after the lapse of two months, the patient was able to exist without them.

2. A man 52 years of age, well to do in life, and without any hereditary tendency to insanity, five years ago commenced the use of morphium injections by the advice of his family physician for the relief of stiffness and loss of power in the lower extremities which came on after recovery from nephritis. The quantity used per diem was at first 1-6 gram, but had been gradually increased to about 3 grains. Failing power both of body and mind induced him to make several attempts to give them up, but the feeling of depression always became so great that he was each time compelled to return to their use. Notwithstanding the large doses of morphium, he suffered from sleeplessness, and also from complete loss of appetite.

Chloral seemed at first to diminish the craving for morphium, but the general health did not improve. There was great bodily weakness, especially of the lower extremities, cramps of the flexor muscles of the arms, failure of memory, mental depression, slowness of speech, inability to take food, pallor and loss of flesh ; a condition of mental excitement now supervened, and when the morphium was withheld he became delirious. By some means or other he obtained possession of a solution of morphium, of which he swallowed a large quantity (about twenty grains). This was followed by a death-like sleep from which he awoke after twelve hours still under the influence of hallucinations. Periods of intense excitement and subsequent depression now followed, and an enema containing 45 grains of chloral instead of soothing, caused furious delirium. This, however was quieted by a hypodermic injection of $\frac{1}{2}$ gr. of morphium.

A second dose of chloral was followed by the same result. The

patient was ultimately cured by being placed under restraint in an asylum.

3. A man æt. 42, commenced the use of morphium for the relief of sciatica, and continued it after the sciatica had ceased to trouble him. In a few years time both physical and psychical effects of the drug became manifested; when abstained from, great mental excitement ensued. Chloral caused headache and nausea, and could not be substituted for the morphium. Symptoms of paralysis set in, and the patient was placed under treatment in an hospital. The quantity of morphium was then greatly reduced, but so much excitement followed that restraint became necessary; when this had lasted about 24 hours, he became quieter but refused food. He slept little, and talked incoherently. The pupils were unequal, the tongue tremulous, the face pale and expressionless, and the urine was voided involuntarily. The patient became extremely weak and depressed, symptoms of collapse appeared from time to time, and stimulants had to be administered. A week later his condition began to improve, and at the end of three weeks he was well enough to be discharged from the hospital, but remained weak in his mind and subject to hallucinations, and finally became paralyzed in the lower extremities.

The other six cases presented similar features; three of them however entirely recovered under careful management after the use of the drug had been discontinued for some time.

It is remarkable that the abuse of morphium produces almost the same symptoms as are usually regarded as indications for its administration, and that when its use is abandoned, either suddenly or gradually, the disturbances which it has caused, especially in the cerebro-spinal and vaso-motor nervous systems, are at first considerably increased. The prognosis of "morphium disease," is unfavorable inasmuch as few can abandon the vice, and those who do generally become confirmed drunkards. With regard to treatment, the best results are obtained by stopping the drug at once, and completely. To this end the patient must be treated as a prisoner, and narrowly watched, else he will inevitably obtain, and continue to use it. After twelve hours total abstinence symptoms of collapse which may even

threaten life, usually set in, and, in some instances demand a small dose of morphium for their relief. The patient should be allowed to take heavy wine,the quantity of which, however,should be diminished as soon as nourishing food can be taken. If during the first 48 hours the patient does not moan and lament but has a good appetite and looks brisk, it is a sign that he has secretly continued taking morphium. The patient must be narrowly watched during the stage of depression, to prevent any attempt to commit suicide. Prolonged baths are of use in promoting sleep and soothing neuralgic pains ; the cold shower bath may be used if there is not much collapse. Diarrhœa is best combated by the free use of fluids taken internally. Vomiting generally resists every therapeutic agent hitherto tried, but is an additional indication for the administration of nourishment, for this reason nutritive enemata are often indispensable from the outset. The subsequent treatment must be conducted on general principles. Employment both for body and mind is desirable so soon as the patient's condition will admit of it.

The administration of morphium by hypodermic injection should never be entrusted to the patient, or nurse. It is no excuse for the physician to say he is too busy to do the injecting himself, for if this be the case he is in duty bound to adopt some other method of administertng the morphium which can always be done in such a way that he may retain some control over the quantity used.

Treatment of Diphtheria.—The treatment of diphtheria requires to be considerably varied in its details, according to the nature of each case, the constitutional peculiarities of the patient, and the type of the epidemic. There are, however, certain general principles of treatment which must always be acted upon, and the infringement of which may lead to disastrous consequences.

Even a limited experience will teach an observant practitioner not to expect curative results in diphtheria from particular medicines, or vaunted formularies of treatment, but to strive to

support life by the measures best suited to each case, rationally using medicines as exigencies and opportunities arise, and not in a routine fashion. The first Begbie of Edinburgh, and I may say the best physicians who have given their views on this subject to the profession, express themselves to that effect. Begbie, whose skill as a therapeutist stood very high, concludes the summary of his able and instructive essay on "Diphtheria and "its Sequels" in the following sentence: "Lastly, as we have no "specific remedy for diphtheria, the disease and its sequels must "be treated on the general principles which regulate our prac- "tice in fever, in inflammation, and in nervous disorders of "asthenic character."

The treatment of diphtheria may be conveniently discussed under the three heads of *general*, *local*, and that which pertains to the *paralytic affections of convalescence*.

The general treatment has to be considered in respect to *atmosphere*, *food*, and *medicines*.

The temperature of the room ought to vary as little as possible, a temperature of about 17° Cent. (63° F.) being maintained. The patient ought to be screened from currents of air, care being taken that free ventilation is not interfered with, and that the air is moistened by a regulated escape of steam from a suitably contrived kettle. * * * A thermometer and a steaming kettle are indispensable in the chamber of the diphtheritic patient. The maintenance of good ventilation, combined with a moist, warm, and equal temperature, is a paramount necessity when tracheotomy has been performed; and in all cases, and all stages of the disease, in which there exists diphtheritic sore throat, it is important, as a means of moderating the paroxysms of glosso-laryngeal spasm, that the patient inhale air which is soft, warm and equable in temperature. Even in the rare cases in which the throat affection is absent, it is the duty of the physician to take the measures best calculated to secure in the sick room such an atmosphere as has been described; for, in such cases, the disease may at any moment manifest itself in the air-passages.

The support of life by stimulants and aliments—the feeding

of the patient—is universally stated to be an essential element in the treatment of a case of diphtheria. * * * Success in alimentation, and success in tracheotomy are the only means by which we gain time, by which we support life for a period, we hope of sufficient duration, to enable the disease to run its natural course, guided and aided by us whenever therapeutic opportunities arise.

It is necessary to insist emphatically on the fact, that, in the treatment of diphtheria, there is nothing like alimentation in importance. Unfortunately, however, this knowledge is too often of little importance to physicians and patients in bad cases, for in such there is almost no power of assimilation, and there is also extreme difficulty in inducing the patient to take food, or having taken it, for him to retain it.

Diphtheria-stricken patients generally loathe food, and children often struggle violently against attempts to feed them. When food is swallowed, it is often rejected immediately. The difficulties in the way of feeding are always great, and sometimes they are insuperable ; but, still, they must be resolutely faced. The alimentation of diphtheritic patients requires great skill, tact, and I might almost say inventive power on the part of the medical attendant, assisted by the co-operation of a well-disciplined, conscientious, and obedient nurse. Each case has dietetic difficulties which are its own, and must be met from hour to hour as they arise.

While, therefore, it would be tedious to go into details, a short statement of the practical principles which require to be carried out may be briefly stated. Pounded raw beef in very small quantities, moistened with the juice of underdone roast beef, is generally the best basis of alimentation. It will seldom be expedient to administer more of this preparation than one teaspoonful at a time, and not nearly so much if there be nausea. With the raw beef and other aliments, a little *pepsina porci* ought to be given from time to time. I have seen the difficulties of alimentation much diminished by the judicious addition of pepsine to food. Together with the raw beef and other aliments we must give stimulants liberally ; the exact quantity must be

determined by the exigencies of each case, and will be subject to frequent variations. As a general rule, however, it is well to remember that brandy is well borne in diphtheria by patients of all ages. Its effects require to be carefully observed in young subjects; but it may be accepted as a fact, that children bear brandy, sherry, and all spirituous stimulants exceedingly well. Proofs of the accuracy of this statement constantly present themselves in practice, both in respect to diphtheria and other diseases. "When," says Sir William Jenner, "the disease begins with marked feebleness of pulse, dusky redness of the throat, and extreme sense of general weakness, wine in full quantities is required at an early period. From six to eight ounces of sherry or port for an adult, and as good a diet as the patient can take, must be given from the first. In the course of the disease much larger quantities of wine, or a proportionate amount of brandy, may have to be given. Of course, the quantity of stimulants must be regulated by the age and habits of the patient, as well as by the character and stage of the disease; but remember that, as a rule, young children bear and take with advantage, in diseases of depression, much larger quantities of stimulants than you would naturally suppose. A child of three years of age, now under treatment for diphtheria at the Children's Hospital, is taking, with apparent advantage, from one to two drachms of brandy every hour, i.e., from three to five ounces of brandy every twenty-four hours."

When we have nausea and vomiting to contend with, we must chiefly trust to brandy and pounded raw beef (duly pepsinated), as the dietetic articles most fitted for keeping up life. When the stomach will bear more bulky food, it is always useful to give a variety of suitable aliments, among which may be mentioned milk, egg-flip, and panada. As soon as it can be borne, cod-liver oil ought to be given. It has a wonderful power in preventing and restoring the waste of tissues.

There is very little if any scope for the administration of medicines when a bad case of diphtheria is at its worst. Till the fury of the disease has spent itself, it is wise to give as little medicine as possible, and never to give any at all unless the indication be clear and positive.

When there is nausea and vomiting we may harmlessly and hopefully give oxalate of cerium or creosote, but we must avoid on account of its depressing influence on the heart, the other great remedy for irritability of the stomach—hydrocyanic acid. As soon as the patient can digest it, iron in some form ought to be given in very small doses. It may be very usefully combined with syrup of the phosphate of lime. Ferruginous medicines are urgently demanded from the very dawn of convalescence by the anæmic aspect of the patient, while cod-liver oil and phosphate of lime are equally called for by his emaciated appearance. Building-up treatment, alimentary and medicinal, is most useful in preventing or moderating the paralytic affections incident to advanced convalescence.

There is no specific medicine for diphtheria—there is no way of *curing* that disease ; but there are many medicines and many measures of signal benefit to diphtheria-stricken patients, by the skilful use of which they are often enabled to recover.

With the use of general means, it is sometimes proper in laryngo-tracheal manifestations of diphtheria to combine local treatment to dislodge or dissolve the false membrane. The treatment by emetics adopted for the former purpose is local in its intention, but general in its action on the patient.

Emetics in diphtheria are seldom of much use ; but still there are many cases in which it is right to try to effect dislodgement of the false membrane. The emetics which ought to be selected are those which do not depress, and which act quickly. Perhaps sulphate of zinc is the most, and tartar emetic the least, suitable. The latter is not only unsuitable, but is pretty certain to prove dangerous by its depressing action. * * * The tartar emetic treatment of diphtheria has been generally regarded as one of the wildest heresies in the practice of medicine, though some able men of large experience think and teach otherwise. * * * * * * * * * * * * * * * * * *

Tracheotomy.—Each case has to be decided for on its own merits ; and the physician in charge must be in constant readiness with his instruments and appliances to perform tracheotomy at very short notice. In the majority of cases the actual crisis

is so sudden as to leave no time to divide responsibility with a colleague. The patient must not therefore (if the attendant can help it) be put in jeopardy by waiting for a formal consultation, or till a surgeon can be found to admit oxygen to the craving lungs. On the other hand, if time permit, there is no emergency in medical practice in which it is more for the advantage of the patient and practitioner that there should be a collation of opinions and a division of responsibility.

In the diphtheritic semi-asphyxiated child, tracheotomy is an operation requiring great care and a good light. There is no surgical difficulty, but the operator, if unaccustomed to the use of the knife, must be cautious. Nay, even an expert requires to proceed slowly, for children with turgid necks have been lost from hurried tracheotomy, performed with imperfect light, by good operators. The difficulty and danger of tracheotomy in diphtheritic children arise from the turgidity of the veins of the neck, caused by the state of semi-asphyxia.

The patient ought to be placed on his back on a table, with a narrow solid cushion, so adjusted under the neck as to project and stretch the trachea. A quart bottle wrapped in wadding, or in anything at hand, answers admirably. This being arranged, the operator with the least possible delay—for the patient's position is a very trying one—makes an incision through the skin, in the mesial line, from the cricoid cartilage nearly to the sternum. The tissues ought then to be divided layer by layer, the gorged veins being carefully avoided, and the muscles and vessels being held to each side by the fingers of the left hand of the operator, or by two blunt hooks held by an assistant. When the trachea has been laid bare, a small incision is made in it, close to the cricoid cartilage, with a sharp pointed bistoury, after which a probe-pointed bistoury is employed to complete the necessary opening. By means of the tracheotomy-dilator, or if that be not at hand, by means of a common dressing forceps, the opening is dilated, and the operation completed by introducing a double canula, and then fastening it by tapes. It may be necessary to draw out detached portions of false membrane before the canula can be introduced. In such cases it is well to keep the opening dilated

till the false membrane and mucosity have been got rid of by coughing or otherwise. The inner canula requires to be frequently removed and cleansed from obstructions. Another method of performing tracheotomy in diphtheria has been recently made by Saint Germain, of the Hopital des Enfants Malades of Paris. The object in view is to avoid hæmorrhage from cutting the engorged veins. A red-hot probe-pointed bistoury is the instrument employed. It is used in the first instance to burn through the skin, intervening tissues, and crico-thyroid membrane; and then by using the cutting edge, to divide the cricoid cartilage, and a few rings of the trachea. With the aid of Lalonde's dilator, the canula is then introduced. * * * *

Local Applications intended to destroy, detach or dissolve the false membrane in laryngo-tracheal diphtheria are in favor with many. Fortunately, they are not so much relied on as they were by Trousseau, and those who wrote by his inspiration. This change of opinion is, as yet, more apparent in the conversation and current practice of the French physicians than in their works. It is now generally admitted that Trousseau attached an undue, and even a dangerous importance, to destroying by caustics the false membrane as soon as it appeared on the pharynx, and on any part of the visible mucous membrane of the throat. His statement that the destruction of the false membrane not only prevented the spread of the local mischief, but even arrested the career of the general disease itself, is now denied by most French clinicians of repute. This change of opinion is fortunately likely to be permanent, for it has been clearly shown, and is now generally believed, that caustics, strong acidulated washes, and active chemical solvents, act mischievously by irritating the mucous membrane, and so exciting increased exudation of caco-plastic lymph.

Gargles, washes, and various other applications, if not of an irritating character, may be used with impunity, and sometimes with benefit. Some of them tend to promote separation of the false membrane without producing any rawness or hurtful irritation of the subjacent mucous membrane. The advantage derived from them is, we must remember, frequently temporary,

and more apparent than real. So long as the disease is in the exudation stage, layer after layer of false membrane will continue to be deposited on the surface of the mucous membrane; and the rapidity with which this reproduction proceeds,may more than counter-balance the benefit derived from the separation of the upper strata. It follows, therefore, that the only topical applications to be used are those which do not irritate. Among the safer and more useful topical applications are glycerine and borax, (of the Br. Ph.), lime water, a very diluted solution of hydrochloric acid in distilled water and a solution of one drachm of neutral sulphate of soda in eight ounces of water. Moist warmth applied externally to the throat generally gives much comfort, and is in no way injurious. It greatly mitigates the pain arising from tumefaction of the cervical glands.—*Edinburgh Medical Journal*, June, 1876.

The action of Jaborandi.—Stumpf, basing his observations on experiments made upon 50 febrile and non-febrile patients in Ziemssens' Clinic, gives a tolerably favorable account of the action of this drug. The leaves and less effective stalks, were employed, an infusion being made of 5:100, and given as one dose. The mixture was taken cold, and the persons experimented upon lightly covered. In order to estimate the amount of excretion by the skin and lungs the patients were weighed before beginning the experiment, and after the termination of the sweating, and from the difference the weight of the saliva, which in the interim had been expectorated, was subtracted. On the day after the experiment, also on the previous and succeeding one, the daily amount of urine was measured, and the pulse, respiration, and temperature (in rectum) taken. With regard to the secretion of sweat, in 50 experiments only two gave a negative result; in 44 cases in which the weight was estimated the excretion through skin and lungs ranged from 1470–13425 grains, the mean being 7080 grains; whereas in an individual, also under treatment, but without Jaborandi, the mean loss in the same time was ascertained to be 1350 grains.

In several persons who had remained in a vapour bath and had perspired freely the average loss of weight was 7080 grains, The increased flow of saliva, which supervened each time, remained, on the whole, somewhat longer than the diaphoresis, the one had a mean duration of 2 hours and 7 minutes, the other 2 hours and 18 minutes. It yielded in 39 observations the average of 3870 grains. On analysis the organic constituents were found diminished, the salts in most cases increased. In about $\frac{3}{4}$ of the cases the nasal excretion and tears were increased, and also the bronchial mucus. No qualitative change could be ascertained in the urine ; whether any quantitative alterations took place could not be determined definitely. The drug only occasionally reduced the temperature in febrile and non-febrile persons. The pulse was always accelerated. The respirations were frequently increased,but as often diminished. Of unpleasant consequences nausea occurred in about half the cases ; vomiting less often. Sleeplessness and headache came on in many cases. Strangury was observed only three times.—*Deutsch Arch. f. Klin. Med.* xvi, quoted in *Centralblatt f. d. Med. Wissen*,No. 24, 1876.

Pilicier speaks much less favourably of Jaborandi, and states with reference to its diaphoretic action, that he has usually found it very moderate. The observations were made in the Clinic at Berne, and the preparation used was the leaves. The sweat was first acid, then it became neutral, and often slightly alkaline. The sialagogue effect followed. The temperature sank in the course of two or three hours 0·3–1·0° C. In most cases this fall was preceded by a period of about half an hour's duration, in which the temperature in the axilla rose 0.2—0.5° C.

In guinea-pigs, dogs and cats, Jaborandi produces increased flow of saliva and tears, and excites diarrhœa with increased peristaltic action of the intestines, also in the two last vomiting and copious urination. Strong doses injected into the veins caused death by dyspnœa in a few minutes. The antagonism between atropin and Jaborandi was demonstrated satisfactorily in many experiments.—*Diss. Bern.* quoted in *Centralblatt*, No. 24, 1876.

Purjesz has studied the action of this drug very carefully in five cases—3 chronic renal disease, 1 mitral insufficiency, 1 psoriasis, and gives elaborate details of the action on the skin, salivary glands and kidneys. The secretions of these organs were greatly augmented and an evident reduction in body-weight caused thereby during the experiment. In one case only the diaphoretic effect was absent. The pulse as a rule was accelerated—6-24 beats. In most instances a slight elevation of temperature was noticed for a variable time after the administration of the medicine, followed by a reduction.

The diuretic action was well marked, but, unfortunately in the cases of Bright's disease, it was accompanied by a notable increase in the amount of albumen. No special benefit resulted from the medicine in the case of mitral disease, nor was there any diminution in the anasarca or ascites. Loss of appetite and occasional nausea and vomiting were the chief unpleasant effects of the remedy.

The author concludes from his experience that Jaborandi is unsuitable as a therapeutic remedy in the dropsy of heart and kidney diseases.—*Deutsch Archiv. f. Klin Med.*, XVII, Hft. VI.

Brandy in a certain stage of Rheumatic Fever.—In some cases of rheumatic fever, I care not whether they be treated by the alkaline method, strictly so-called, by blisters to the joints, by opium, or by *nihilism*, as well as by suitable food, I know that a certain stage is reached in which no measure appears so useful as the addition of a little brandy to the diet.

When any of the above-mentioned methods prove of little value, the patient is apt to become very weak, anæmic and exhausted. The perspirations are profuse, the sweat being often alkaline, and the cardiac action becoming feeble. It is in such a condition, often after two or three weeks of ineffectual treatment, that the beneficial influence of brandy is well marked. I generally begin with an ounce in the course of twenty-four hours, and seldom have to order more than two ounces during the day to secure improvement. The signs of amendment are

improved relish for food, diminished sweating, and relief to the pains. The force of the circulation is increased, and a sense of relief is usually expressed by the patient.

It will be at once obvious that this is no piece of routine practice, that I am very far from putting in a bold plea for the indiscriminate use of brandy in the treatment of rheumatic fever, I would not, on several accounts, be misunderstood on this point.

Again, the use of this dietetic adjunct has to be considered in the event of cardiac inflammatory processes. If there be active pericarditis, and the patient be young, as would probably be the case, it is well to withhold stimulants as a rule. The quieter the circulation is kept the better, and the same holds good in the case of valvular endocarditis. Inasmuch as these cardiac symptoms are more urgent about the second week of the illness, they do not consequently press for so much consideration in the stage to which I now specially refer, which is most commonly met with after the third week. It has appeared to me that this condition is somewhat apt to supervene where the alkaline treatment has been vigorously pursued, and has not proved of much avail to subdue the essential features of the disorder. There is then manifestly additional cause both for the anæmia, and the depressed state of the circulation. Notwithstanding this occasional result of the alkaline method, I feel bound here to state my conviction of its value in the majority of cases of rheumatic fever.—*Ibid.*

Foreign body in windpipe. — Mr. Maunder, on Friday, 12th inst., removed from the left bronchus of a boy aged thirteen, (an in-patient of the London Hospital) a smooth oval piece of glass an inch long, and forming part of a sleeve link. It had been in the trachea eighteen days without symptoms, and about thirty hours before operation had fallen into the left bronchus. After consultation with Dr. Down, tracheotomy was performed, the patient was inverted and shaken, but with no avail. A loop of stout silver wire was then passed six or seven inches through the wound downwards, and to the left; on the wire being withdrawn, the foreign body came with it. The patient is well.—*Medical Times and Gazette.*

Use of Physostigmine.—A new therapeutic indication for the use of Physostigmine; by Professor Laqueur of Strasburg.

Reasoning from the now well established fact, that atropine sometimes causes an acute outbreak of glaucoma in eyes predisposed to this disease, Prof. L. was induced to try the effect of its therapeutic antagonist, physostigmine, in cases of glaucomatous tension of the eyeball. The preparation used was the "Sulfate neutre d' eserine," prepared by Vée of 42 Faubourg St Denis, Paris.

Three or four drops of a $\frac{1}{3}$–$\frac{1}{2}$ p. ct. watery solution of this preparation were dropped into the eye daily, at intervals of about 20 minutes.

In five cases of simple glaucoma, and one of secondary glaucoma, (in consequence of partial luxation of the lens), thus treated for 3 or 4 days, the tension was in every instance notably reduced, and ten days later still further diminished, with a corresponding improvement of vision. In the case of secondary glaucoma, the tension fell from T + 2 to the normal, and has remained normal ever since. Experiments on healthy human eyes and on the eyes of rabbits were negative, inasmuch as no perceptible alteration of tension occurred.

The action of physostigmine in diminishing abnormally increased tension, probably depends upon its power of directly stimulating the smooth muscular fibres of the choroidal vessels. In a work recently published, Harnack and Witkowski have shown that physostigmine stimulates both smooth and striped muscular fibre independently of terminal nerve filaments. The Professor thinks that benefit may be derived from the use of physostigmine; (1) in all cases of glaucoma simplex, especially where there is no abnormality in the iris or anterior chamber; and it is in these cases that experience has shown iridectomy to be of no avail.

(2) In all cases of glaucoma in which iridectomy has been performed without benefit.

(3) In those cases of secondary glaucoma in which the movements of the iris are not impeded by anterior or posterior synechia.

Meningitis as a complication of Pneumonia.—By Ed. Surugue.

The connexion existing between pneumonia and various manifestations of the character of delirium or convulsion has been pointed out by numerous authors, but the existence of true meningitis in the course of this disease is still questioned by some physicians, although M. Laveran has drawn attention to the coincidence. M. Surugue has sought to furnish some new material for the solution of this question. His work is based upon the analysis of 12 cases, most of them furnished by M. Vulpian. There is deduced, from an anatomical point of view, the most positive proof that the cerebral meninges participate in the inflammation in certain cases of pneumonia. In the pia mater is found every possible degree, from mere vascular congestion up to the most extensive purulent effusions of acute meningitis.

The symptoms, on the contrary are generally not at all well marked. Usually there is observed headache, delirium, vomiting, and then coma : but these symptoms which might occur during a simple pneumonia, do not possess diagnostic significance. A more reliable indication, but one which is frequently wanting, is a slowness of the pulse, which is never found in acute pneumonia, but which on the contrary is tolerably common in meningeal irritation. Dilatation of the pupils also points to some cerebral complication.

In other cases, patients show decided head-symptoms, such as apoplectic attacks, hemiplegia, retraction of the head, wandering delirium. Sometimes spinal symptoms are added to these, such as tetanic rigidity, tremors, or exaggerated reflex movements.

The difficulty of the diagnosis arises from the fact that sometimes the pneumonic symptoms disappear entirely, being masked by these cerebral phenomena : or again from the manifestations occurring during the course or the decline of a recognised pneumonia, being put down to the account of alcoholism or anæmia, but never to meningitis.

In some of these cases the thermometer may be able to settle

the diagnosis: when, for example, after an apoplectiform attack, the temperature should be found 102°, we might conclude that most probably we had to do with pneumonia, because, in an attack of true apoplexy, there is an initial depression of the temperature.

Meningitis, associated with pneumonia, is one of the most dangerous possible complications: as yet, it has always proved fatal. Still the author raises the question of the possibility of effecting a cure even in these cases, and cites, in support of this view, four cases which seem to him conclusive. Of these four cases, one only appears to us to possess any value. It is that of a man 20 years of age, who had pneumonia accompanied by hemiplegia, and who recovered. Two others have some of the features of the atrophying paraplegia of the convalescent, and the last seems to have been a paralysis independent of the pneumonia, and coming on a month after the chest trouble had been entirely recovered from.

The treatment most commending itself for these meningeal complications appears to be the application of leeches and cups to the nucha or behind the mastoid process.

(*Thése de Paris*, 1875. *Revue des Sciences Médicales* 15 *April*, 1876.)

Diphtheria.—In the treatment of diphtheria, in 102 cases, Dr. C. E. Billington, of New York, had the following results—viz, 14 deaths and 88 recoveries. His mode of treatment is local disinfection with perchloride of iron or lime water and glycerine, also the internal administration of salicylic acid and sulphite of soda. He gives the following prescription.—

℞. Acid. salicylic. gr. x.; sodii sulphitis, ℥ss.; glycerini, ℥ss; aquæ, ℥iij. M. One teaspoonful every hour.

The well-known action of salicylic acid and sodium sulphite as antiferments indicates their extreme value in all zymotic diseases, and it is to be hoped that a recognition of their value will be followed by a more general use in such cases.

Salicylic acid especially has been found very effective in acute rheumatism, and it has been asserted that this drug is as certain a cure for that disease as quinine is for the ague.—*The Doctor.*

Penetrating Wounds of the Knee-joint.—In concluding a report of eight cases of this form of injury, Dr. A. Gayet arrives at the following conclusions: 1. A penetrating wound of the knee-joint, when made by a pointed instrument without complication, is not dangerous provided it be allowed to cicatrise in an immovable position. 2. When left to itself or improperly treated, arthritis of the most formidable character may result. 3. The dangers of arthritis are in direct proportion to the extent of the wound and the difficulties which prevent union by first intention. 4. Complications of the bony structures render the case extremely grave; nevertheless, fractures of the patella, if complicated, do not call for amputation or resection. 5. The presence of foreign bodies, however small, determines arthriti sand its consequences, and demands amputation or resection. 6. Posterior wounds would seem to be more dangerous than anterior wounds, on account of the density and number of the tissues, the presence of vessels, etc.—*Lyons Médicale*, 4, 1875.—*N. Y. Medical Journal.* E. F.

Milk diet in Albuminuria.—M. Tarnier, relying upon the good effects obtained from a purely milk diet in Bright's disease, entertained the happy idea of using it in the albuminuria of pregnancy. Employed in a certain number of cases, this regime has given uniformly good results: the albuminuria has always improved within from 10 to 15 days or entirely disappeared previous to confinement. The writer believes that, by this means, we can very frequently prevent the occurrence of convulsions, the cause of which, according to M. Tarnier, is nearly always to be found in the changes wrought in the system by a pre-existing albuminuria, which has been present for a certain length of time. To be successful, the milk diet should be instituted as soon as ever albumen is found to be present in the urine of a pregnant woman, even when there is no œdema at all and should be continued steadily until all traces of albumen have disappeared. Once convulsions have actually occurred it is of course too late.

(*Progrés Médical. Revue des Sciences Médicales*, 15 *Avril* 1876).

Treatment of Fissured and Ulcerated Nipples.—In the *Annales de Gynecologie*, Dr. Legroux advises the following treatment. Spread with a camel-hair brush a layer of elastic collodion around the nipple, in the radius of an inch or more; a piece of gold-beater's skin should then be placed over the nipple and collodion, taking care to make a few holes with a pin over the part of the gold-beater's skin which covers the nipple, so as to allow the milk to ooze through. No collodion should be spread on the nipple itself, as more pain might thereby be occasioned. By the rapid evaporation of the ether, the collodion dries up and the gold-beater's skin adheres The nipple is thus more or less pressed down by the latter, which, in drying, becomes tense. When the child is to be nursed, the end of the nipple should be wetted with a little water. The covering of gold-beater's skin becomes soft and supple, and allows the child to suck without distressing the mother.

The operative treatment of Pleuritic Exudations.—Ewald in reviewing the experience of 15 years (1860–1875) in *Frerich's Clinic* in Berlin, has arrived at the following conclusions: (1). Serous exudations should not be punctured before the third week, unless an *indicatio vitalis* arise. (2.) No serous exudation will become purulent if the tapping be performed with exclusion of the air, and previous disinfection of the instrument. (3.) In each case it can only be determined by an exploratory puncture whether the exudation is serous or purulent. (4.) Purulent exudations must be incised as early as possible, not tapped. (5.) By the present method of treatment, namely, incision in the 6th intercostal space, and washing out with disinfectants once or twice daily, for which purpose the wound is kept open with a catheter, or if contraction ensues, resection of one or more ribs, purulent exudations have a mortality of from 50 to 60 per cent. (6.) Hæmorrhage exudations are always dependent upon malignant growths of the pleuræ. (7). Serous exudations do not exclude the existence of tubercle or cancer of the pleuræ.—*Centralblatt* f. d. *Med. Wissen*, No. 22, 1876.

To Check Colliquative Sweating.—The exhaustive sweats in surgical diseases and phthisis are entirely controlled, according to Dr. Thomas J. Dunott, of Harrisburg, Pa., by small hypodermic injections of atropia and sponging with hot vinegar. In a case in point, given in the Virginia *Medical Monthly*, he writes of a case of osseous injury, "he sweats profusely and constantly. To have ice pills and hypodermic injection of $\frac{1}{100}$ gr. atropiæ sulph.; also to be sponged with hot vinegar. This controlled the sweating, which was so profuse as to keep the bed clothing saturated whenever the atropia and sponging were omitted.

It is my belief that a very small dose of atropia, when combined with the hot vinegar application, will be most effective in controlling this exhausting discharge from the skin. Neither used alone would be successful; but my experience with atropia is limited to doses no larger than the one mentioned, $\frac{1}{100}$ gr.

Administration of Salicylic Acid.—In view of the many therapeutic uses of salicylic acid, it has become important to find a menstruum that will dissolve in it sufficient quantity. The ordinary solution in some alcoholic vehicle contains so much alcohol, that it cannot be given to children or to women; while, on the other hand, the caustic character of the acid prevents its administration in suspension in a mucilaginous fluid. M. Cassan, of Paris, believes that he has found the desired solvent in the citrate of ammonia. While thirty grains of salicylic acid require an ounce to an ounce and a half of rum or cognac alone to dissolve them, if fifteen grains of citrate of ammonia be added to the acid, only two drachms of the spirit will be required to make the solution. The citrate of ammonia gives no unpleasant taste to the fluid. The following formulæ may be employed:

℞. Acidi salicylici, ʒ i.; ammon. citrat., ʒss.; spirit. vini Gallici, ℥ i.; aquæ destil., ℥ v. Or for a single potion, ℞. Acidi salicyl., grs. xv.; ammon. citrat ʒss.; syrupi simp., ℥ i.; aquæ destil., ℥ iv.—*Bulletin Général de Therapeutique*, April 30, in *N. Y. Medical Record*, June 10.

Oxide of Zinc in the night sweats of Phthisis.—I can certainly bear testimony to the decided action of oxide of zinc in checking the night-sweats of phthisis. This remedy was first employed by Dr. Robert Dickson. The dose may vary from two to four grains. I have generally found two grains sufficient. The sulphate of zinc is more highly esteemed for this purpose by some physicians, but I am not well satisfied with this myself. The late Dr. Theophilus Thompson, who strongly recommended the use of the oxide of zinc, expressed his opinion that the sulphate was less efficient, and he quotes Pereira's statement as to its inefficacy for checking cutaneous exhalation. My colleague, Dr. Andrew, who has a special field for experience in the treatment of phthisis, prefers the sulphate to the oxide as an anti-sudorific agent. The action of the salts of zinc is no doubt due to direct influence upon the nervous system. No direct experiments have as yet, I believe been made to illustrate such effects. The fear of inducing by this treatment a peculiar form of wasting disorder, which has been described as *tabes sicca*, cannot, I imagine, enter into one's mind, inasmuch as the doses recommended are not large, and because ill effects are not usually observed after the employment of the zinc salts in considerable doses for various nervous disorders.

I have not found acetic acid of equal value in checking night sweats, although I have employed from thirty to sixty minims of it for a dose. Dr. Peacock's plan of ordering nourishment to be taken by phthisical patients when they awake early in the morning in a state of profuse prespiration, is, I find a very excellent one. He recommends a cup of cold tea, made with cream, to be taken with a biscuit, or some water and claret instead.—*Ibid.*

Does Beef-tea cause or aggravate a tendency to Diarrhœa?—This question demands an answer. It is held by some physicians that in any disorders in which there is looseness of the bowels it is improper to employ beef-tea as an article of diet. Mutton-tea and other flesh juices are believed to have no tendency to act as laxatives. Now if

this be correct, it is manifestly of some importance to be aware of the fact; and the matter would have to be considered, especially in the treatment of typhoid fever, and acute and chronic dysentery.

I have paid some attention to this subject, and have to confess that I have obtained no proof whatever that beef-tea increases or aggravates any tendency to diarrhœa, either in typhoid fever or chronic dysentery. Proper regard has been paid to suitable diet in the cases I have watched. I am sure that diarrhœa is more likely to be kept up in fevers by the use of starchy and farinaceous food which, as Dr. Wilson Fox has shown, are very ill digested when there is pyrexia, owing to the inability of the salivary and pancreatic glands to furnish sufficient secretion for this purpose. While there is fever the flesh juices are better dealt with than any other food except milk, which with ice in it, constitutes the best diet of all in pyretic conditions.

That the patient may not suffer from the want of vegetable juices, it is well to adopt Sir William Jenner's suggestion of boiling some vegetable in a bag in the beef-tea, or of mixing some with the meat, and subsequently straining off all particles of it. Small quantities of lemon-juice may be added to the beef-tea with advantage. I have no hesitation, therefore, in prescribing beef-sea in any case of typhoid fever or dysentery, provided always that it is properly made, and free from solid particles and from fat. In any case, however, it is well to change the diet and employ mutton, or chicken tea in a similar manner.—*Ibid.*

Treatment of Herpes.—I am well satisfied to employ flexile collodion in most cases of herpes, requiring local treatment. The advantages of this agent are that it is simple in its application, cleanly and efficacious as a protection from irritation.

On contracting, collodion exercises compression upon the dilated vessels of the areolæ, and it prevents rupture of the vesicles. I formerly employed dusting with oxide of zinc, and

had a piece of soft cambric bandaged on to the part, but I now prefer painting with collodion. Several coats should be applied, and should the layers pell off or crack, more must be put on. It is important to prevent rupture of the vesicles for several reasons; if this happens, severe pain is apt to ensue, and the neuralgia may thereby be aggravated; again, scars are more likely to follow. It seems probable that early application of collodion may prevent the further development of vesicles. Dr. Anstie thought so, and I am disposed to agree with his opinion.

In the simpler non-neuralgic forms of herpes, such as occur on the lips, for example, collodion mixed with glycerine may be used in the proportion of five or ten minims of the latter to an ounce of the former.

Internally in the majority of severe cases, quinine appears to be the best remedy, and any persistent neuralgia must be met by such treatment as will best restore the general health.—Dr. Duckworth, St. Bartholomew's Hosp. Reports, 1875.

Aphasia—Göthe.—It is indeed strange to find that Göthe has given a perfect description of aphasia. The following passage is to be found in the sixteenth chapter of the 7th book of "Wilhelm Meister," which was written in 1797.

"Unhappily this state of things did not last long. My father was suddenly seized with an attack of apoplexy which paralysed his right side and destroyed his power of speech. We had to guess at any thing he wanted to ask for, because he never used the proper words to express the idea in his mind. I had also many anxious moments when he wished to be alone with me. He explained by means of most violent gesticulations that every one else should retire, and when we did find ourselves alone together, he could by no means utter the words he wanted to explain his thoughts. And then his impatience knew no bounds."

Any one who has observed patients suffering from aphasia cannot fail to be struck with the singular fidelity of the above description and especially the peculiar annoyance exhibited by these persons at their failure to express ideas which are clearly before them.

CANADA

Medical and Surgical Journal.

MONTREAL, AUGUST, 1876.

THE CANADIAN MEDICAL ASSOCIATION.

The annual meeting of the Canadian Medical Association will be held at Toronto on the 2nd of August, instant, and we hope to see a large and influential gathering. The Association is in the ninth year of its existence and very little has been done by it further than promoting good fellowship and social converse between the members of the Profession in the various Provinces of the Dominion of Canada. But while these meetings have been barren of any good suggestion, we think it is within the province of such an influential body as the Canadian Medical Association to allow itself to be heard on questions of general public interest. It is customary at meetings of similarly constituted bodies, to publish a programme of proceedings. If such a document exists we have not been favored with a copy, but we suppose some order of proceeding will in due time be adopted.

With all due respect we offer a few remarks on a subject of great importance to the welfare and general progress of the country, one which might be taken up and discussed with advantage at the meeting of the Association. We doubt not that the subject of Public Hygiene will come up for discussion. Any expression of opinion publicly made, coming as it will from representative men, hailing from all the Provinces of the Dominion of Canada must command respect, and we are convinced that the discussion of matters, bearing on the material welfare of the people of this Dominion, together with an honest and fearless expression of opinion, would have great weight with the Legislature at Ottawa, and reforms in sanitary enactments be the result.

We have before alluded to the absence of a general system of registration of births marriages and deaths. This appears to be a great want, as without it we are unable to ascertain the relative healthfulness or the reverse of the different parts of the country. It is the very beginning of the whole system of sanitary observation. But a system of registration to be of benefit must be uniform, it is therefore a matter not of local interest, but of general importance. Objection is raised to the establishment of civil registration, as it is thought that it would be attended with considerable outlay. This we think is an error, as it is undeniable that under the present imperfect system of clerical registration large amounts are paid into the clerical bursaries, more indeed than would be sufficient to defray the expense of civil registration.

Dr. Brouse, the member for Grenville, introduced a motion before the Commons of Canada at the last session of Parliament for the "appointment of a committee to inquire into the expediency of asking legislation with a view to constitute a Bureau of sanitary statistics at Ottawa." This motion, after some opposition, was allowed to pass, and a hurried and somewhat crude report was drawn up and there the matter ended for that session. The Canadian Medical Association might with propriety take up the discussion of this all-important subject, and we think that a memorial presented to the Commons of Canada coming from so important and influential a body of Scientists, would greatly strengthen the hands of Dr. Brouse and receive due consideration from the Legislature. Can we in Canada adopt a better system than that in force in Great Britain? The English act was introduced by Lord John Russell, with a view of redressing certain grievances in the old system of registration complained of by dissenting religious communities. Forty years experience has wonderfully altered the original act, and it is now believed to be the best in existence, in proof of which we find it being adopted by other civilized nations.

Any system to be efficient must be general and uniform. It must be carried out by officers responsible to a chief, whose office ought to be at the seat of Government. Furthermore, to secure

regularity, registration must be made compulsory. Every birth should be registered within twenty-four hours of the event, under a heavy penalty or imprisonment for failure of compliance with the law. Marriage to require registration, to give it legal status, failing registration the marriage to be illegal and not recognized by law. In the case of Deaths no burial to be permitted without a certificate of registration, to be obtained alone, after due evidence as to cause, either from a medical practitioner or after a coroner's inquiry. We cannot do better than copy the English act, or take it as a base whereon to draw up one of our own. Very much has been written regarding the mortality of our large cities, but unfortunately the source from whence we draw our inspiration is defective and unreliable ; nor will we ever arrive at anything like certainty, under the present defective method of enumeration.

Canada has published three or four decennial census, these are public documents and can be consulted by any person interested in the subject of statistics, but we fear the information to be found in them, so far as vital statistics is concerned, is quite unreliable. We have heard that these documents have cost millions of dollars. With a comprehensive system of civil registration, information of this nature would be sure and reliable, and at any time attainable, and in point of cost might be made self-sustaining, or at any rate the outlay would be considerably less than under the present imperfect system. By civil registration we could year by year note the growing strength of our country, the increase of our population other than by immigration, and the mortality from causes preventible, in different localities. These are a few benefits which might follow on the track of a General Registration Act. It is a matter which sooner or later the Government of the country will have forced upon it, and one which we should gladly see introduced into the House of Commons of Canada, not by a private member of that house, but as a Government measure with all the weight and prestige of the Government of the day.

CORONERS' INQUESTS.

It is by no means agreeable to us to feel under the necessity of recurring so frequently to the adminstration of the important office of Coroner; but we do not think we should be fulfilling our duty as a public journalist, more especially concerned with medical matters, if we did not advert to cases such as that we are about to relate.

A few weeks ago a physician of this city was sent for to attend a woman who, he was informed, was either "flooding or in labour." On arrival he found the patient to be a domestic servant in a well-to-do family—unmarried, of course. She was in bed, and said she had been delivered 12 hours previously. She had not acquainted any one in the house with her condition during the night, and in the morning simply told her mistress that she was unable to attend to her duties, and wished her sister sent for. By her side lay a dead child presenting a healthy and mature appearance. In the bed were to be seen the evidences of a recent delivery, the woman having received no attention. The physician of course notified the Coroner of the circumstances. This officer visited the house, made some enquiries of the woman and her mistress, and had the body of the infant removed to the public dead-house. An inquest was held the same evening. One witness only was examined, viz. Dr. Reed, (the physician already mentioned). His evidence consisted in a relation of the facts as above detailed, and the result of his examination of the body. This was as follows—The body was that of a large female infant, with every appearance of maturity. No marks of violence visible externally. Placenta and funis remained attached. The face and lips presented a bluish appearance. Lungs light colored and fully inflated, every portion floating freely on water. Heart filled with black blood. Vessels of brain deeply gorged with black blood. Dr. Reed therefore testified that the child was of full term, had fully breathed, and had died of asphyxia. Whereupon a verdict was brought in that this infant had died from asphyxia and no blame therefore attached to any person or persons. We

are not in possession of the actual words of the verdict, but have reason to know that the above is substantially correct.

Comment is almost unnecessary. We have before had occasion to say that, as things were, we would almost be better without a Coroner, and certainly, judging from this example of incompetency we are more than ever confirmed in that opinion.

Can any impartial person reading the above relation agree with this extraordinary jury, that "no blame" should fall upon such an inhuman mother. If she was not instrumental in taking the life of the child (and we are far from saying this), she was guilty of most criminal neglect in not taking proper measures to have some care during her confinement. Why was this investigation (?) so hurriedly conducted, and why were the circumstances to justify such a verdict not substantiated by evidence under oath ?

OCULIST TO THE GENERAL HOSPITAL.

In our last number we mentioned the appointment of Dr. Frank Buller to the post of oculist and aurist to the Montreal General Hospital. We beg to congratulate the Governors of the Hospital upon having thus provided for a want which has long been felt in this community, for it cannot be supposed that the regular members of the staff possess the necessary special acquirements for the careful, scientific, and successful management of these numerous and important cases. The appointment has been made upon the unanimous recommendation of the Medical Board, who were of opinion, that from the long experience of Dr. Buller in the Moorfield's Hospital and on the Continent, his assistance in the work in the Hospital would be a great advantage both to the public and to themselves. From the high estimation in which we know this gentleman to be held by the first ophthalmic surgeons of London, we have every reason to believe that his appointment will prove in all respects most satisfactory. We understand that Dr. Buller has already delivered a short course of extra-academical lectures on ophthalmology in connection with the Summer Session of McGill College, and that arrangements will be made for a similar course during the next Winter Session.

SUMMER SESSION McGILL UNIVERSITY.

In the May number of our periodical we announced an extended summer course in connection with the Medical Faculty of McGill University. For several years past, regular clinical instruction throughout the summer months was afforded students in the wards of the Montreal General Hospital; this was done with a view of rendering clinical instruction a characteristic feature of this school. The summer session of 1876 has been rendered more attractive by several additional subjects. The Professor of Clinical Medicine, Dr. Ross, delivered a special course on Physical Diagnosis. The Professor of Clinical Surgery, Dr. Roddick, delivered a course on Practical and Minor Surgery. Dr. Buller delivered a course of fifteen lectures on Ophthalmic Surgery. The Professor of Practical Chemistry, Dr. Girdwood, delivered his course of Practical Instruction on Chemistry, with daily work in the laboratory. The Professor of Institutes of Medicine, Dr. Osler, delivered a course of Practical Histology, and also gave pathological demonstrations in the post-mortem room at the Hospital. These lectures were open to all matriculated students of the University free of charge, with the exception of those on Practical Histology and Practical Chemistry. The session opened on the 1st May, and closed on the 22nd July; and we are gratified to be able to state that it was an entire success. We believe that between forty and fifty students availed themselves of the opportunity thus offered to acquire practical instruction.

INTERNATIONAL MEDICAL CONGRESS.

PHILADELPHIA, SEPTEMBER, 4–9, 1876.

The International Medical Congress will be formally opened at noon on Monday the fourth day of September.

The sessions of the Congress and of its Sections will be held in the University of Pennsylvania, Locust and Thirty-fourth Streets

The General Meetings will be held daily, from 10 to 1 o'clock. The Sections will meet at 2 o'clock.

Luncheon for Members of the Congress will be served daily in the University Building from 1 to 2 o'clock.

On Wednesday evening, September 6th, Dr. J. J. Woodward, U. S. A., will address the Congress on the Scientific work of the Surgeon-General's Bureau.

The Public Dinner of the Congress will be given on Thursday evening, September 7th, at 7 o'clock.

The Registration book will be open daily from Thursday August 31st, to Saturday, September 2nd, inclusive, from 12 to 3 P.M., in the Hall of the College of Physicians, N. E. corner of Thirteenth and Locust Street, and at the University of Pennsylvania, on Monday, September 4th, from 9 to 12 M., and daily thereafter from 9 to 10 a. m. Credentials must in every case be presented.

Letters addressed to the Members of the Congress, to the care of the College of Physicians, N. E. corner Locust and Thirteenth Streets, Philadelphia, during the week of meeting will be delivered at the University of Pennsylvania.

The Secretaries of State and Territorial Medical Societies are requested to forward without delay to the Chairman of the Committee on Credentials, I. Minis Hays. M.D., 1607 Locust St., Philadelphia, lists of their daily accredited delegates to the Congress.

Delegates and visitors intending to attend the Congress are earnestly requested individually to notify immediately the same Committee.

This information is desired to facilitate registration, and to ensure proper accommodation for the Congress.

Members intending to participate in the Public (subscription) Dinner of the Congress will please notify the Secretary of the Committee on Entertainment, J. Ewing Mears, M.D., 1429 Walnut St. Philadelphia.

Gentlemen intending to make communications upon scientific subjects, or to participate in any of the debates, will please notify the Commission before the fifteenth of August.

Philadelphia, July 20th, 1876.

Personal.

E. B. C. Hannington, M.D., C.M., ('75.) has been appointed Medical Superintendent of the General Hospital of St. John, N.B. We must congratulate the Institution on its choice of such a competent man.

Joseph Hils, M.D., C.M., ('73.) has been practising since his graduation in Rhode Island, he was in town last month, and spoke highly of the condition of the Profession in that State.

Dr. Cline has completely recovered from the attack of typhoid fever. He has gone to Tadousac for the summer.

Dr. C. N. Stevenson, M.D , ('76.) is practising in Sarnia.

CANADA

MEDICAL & SURGICAL JOURNAL

Original Communications.

CASE OF SYCOSIS,—TREATED BY CARBOLIC ACID AND CANADA BALSAM.

By G. A. Stark, M.D., Milwaukee, Wis.

R. B. M., short, and of a nervo-sanguineous temperament, applied to me on the 22nd of May, 1874, suffering from an attack of Sycosis or Mentagra. He says that he contracted the disease at a barber's shop, about three weeks before. Had been under treatment elsewhere for about two weeks, and as no improvement had taken place, he was much discouraged. He had become thin, nervous, irritable and sleepless, and his strength and appetite had failed. The disease was confined to those parts covered by the beard, whiskers and moustache, and was accompanied in some cases by inflammation, in others by induration, and in some by suppuration. Numerous scabs also were present. The pustules were characteristic, small and acuminated, and a hair traversed the centre of each. The scabs and pustules were more numerous on the left side and under the chin than elsewhere. Hairs when extracted looked as if covered with a whitish powder.

Treatment.—He had been using benzoated oxide of zinc ointment. I prescribed an ointment of ac. carbolic gr. x to ung. zinc. ox. ℥i, to be applied thoroughly two or three times a day, the hairs to be first cut short, and the parts washed with juniper tar soap. He was put upon iodide of potassium with

tonics, and ordered a purgative when necessary. Diet: beef-tea, milk, eggs, &c. This treatment was continued for about a week, and I also pulled out the hairs in some places; the disease, however, continued unabated.

I then ordered the iodide of sulphur ointment to be applied as above for a week, without any perceptible improvement, and the patient complained much of the irritation caused by the application. I now ordered him a teaspoonful of the Elixir Iodo-bromide of Calcium Compound in a little water, before each meal and at bed-time. I also prepared the following to be applied by a camel's hair pencil, viz., equal parts of carbolic acid and Canada balsam. The change proved satisfactory, improvement being most apparent where the hairs had been pulled out. Epilation was then done more generally and the preparation applied as before. The first application was made on June the 5th, and by the end of the month the disease was completely cured. I ordered him to continue the internal treatment for another month as his appetite and general condition improved under it. I also recommended him to go on using the juniper tar soap.

The acid in combination with the balsam acted admirably in this case. The acid, especially after epilation, enters the pustules, and thus strikes at the very root of the disease. The contents of the pustules are almost instantly converted into a white crisp, and I have no doubt it destroys the offending parasite. The balsam forms a varnish over the parts to which it is applied and thus diminishes irritation. The irritation caused by the application only lasts a short time and is followed by relief. The irritation is not to be compared to that caused by the application of iodide of sulphur ointment, &c. The patient's appearance is much improved, the parts looking somewhat paler than natural, instead of being studded with pustules, or covered with filthy-looking scabs. If applied thoroughly, once in three or four days, or in some cases a week would be soon enough to renew the applications. If necessary, it may be applied every day. It may also be used in different proportions as to the proportion of acid in the combination, as deemed most suitable in

each particular case. I have found this preparation satisfactory in other forms of disease of the skin, as ring-worm, &c. It is worthy of trial in any form of disease of the skin which is thought to be of parasitic origin. I have accomplished more with this combination, prepared in suitable proportions respectively of the acid and balsam to suit individual cases, and in a much shorter time, as an external application in many forms of cutaneous affection, than with all other local applications combined. I have also found it to act well in some cases of burns and scalds.

CASE OF SUNSTROKE TREATED BY QUININE,

By Dr. Drake.

Reported by J. C. Cameron, M.D., House Surgeon, Montreal Gen. Hospital

G. D., æt. about 45, was brought by the police to the Montreal General Hospital about half past five o'clock in the afternoon of July 13th, suffering from symptoms of sunstroke.

The patient is a harmless, good-natured fellow, somewhat imbecile: he has been for some time an inmate of the Protestant House of Refuge. The day before admission he went away from the Refuge and did not return. The following afternoon the police found him lying on his back, insensible, in an open place near the wharves quite unsheltered from the intense rays of the sun. He was at once conveyed to the Hospital.

On admission he was insensible, skin hot and dry, face dusky, pupils contracted, conjunctiva injected, tongue dry and parched, respiration shallow, pulse feeble and thin, almost imperceptible and quite impossible to count, secretion completely arrested; temperature 107.8°

Seeing the necessity for prompt action, I at once applied an ice-bag to the head and on account of the excessively high temperature gave him 30 grains of quinine in three doses at intervals of half an hour. Two hours after the first dose was administered, the skin became moist and was soon covered with

profuse perspiration; four hours after the first dose, urine and liquid fæces were passed freely in bed, and the urine continued to pass away in large quantity during the night. Six hours after the quinine the temperature had fallen to 103°, pulse 112, and fourteen hours after quinine to 100.4°, pulse 90. Dr. Drake saw him the following day, and ordered quin., gr. v, to be given every four hours; four such doses were given when he was allowed up. All bad symptoms disappeared, and he was discharged from Hospital on the morning of July 17 having been under treatment for three days and a half, and having taken altogether fifty grains of quinine in divided doses.

The quinine was administered by the mouth in the form of 10 grain cachets: if it had been impossible to give the quinine in this manner, it would have been administered hypodermically.

The accompanying chart shews the rapid fall of the temperature under the quinine treatment.

PROCEEDINGS OF THE ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

The ninth annual meeting of the Canadian Medical Assocation was held in the City of Toronto on the second and third days of August, ult:

The morning session was occupied with routine business, and the proceedings in the afternoon commenced with the address by the President, Dr. Hodder, of which the following is a synopsis.—"Gentlemen, we meet together this morning, to celebrate the ninth annual meeting of the Canadian Medical Association, and from the large number of visitors and members whom I see

before me, I feel assured that it will continue to meet with the support and approbation not only of the medical practitioners in the larger cities of the Dominion, but of the medical profession throughout the length and breadth of the land. In the first place, gentlemen, allow me to offer, on the part of the medical men of Toronto, a most cordial and hearty welcome to the delegates from the United States, as well as those from the eastern and more distant portions of the Dominion, and to invite them to join in all the discussions or debates, and to consider themselves for the time being in every particular as members of the Association.

When we see the success which has attended the formation of these societies in the United Kingdom, and in almost every other country of Europe; when we see the ponderous volumes yearly issued by our hard-working, industrious, and painstaking friends and professional brethren in the United States; it ought to stimulate and induce the medical men of the Dominion to follow so excellent an example. When we consider the vast amount of practice and observation which is daily and hourly going on, not only in the larger cities but in the surrounding districts of the Dominion, we cannot but feel with regret that an enormous fund of valuable information and experience is and has been allowed to run almost entirely to waste for a long succession of years. By joining such an Association as that which I have the honor to preside over this day, the numerous body of our professional brethren extensively engaged as general practitioners, who spend long and active lives in the practice of their profession, would undoubtedly be able to contribute inexhaustible stores of medical experience of the highest interest and value, and which, but for such a society, would remain uncommunicated, and therefore lost to the profession. The local medical societies do some good, but the results of their meetings are rarely published, and therefore many valuable cases never meet the eye of the profession generally, and are thereby lost to the world. There is, however, one point of very considerable moment to which I beg to draw the attention of the younger members of the profession:—Many

young practitioners are deterred from publishing or bringing before an association or society cases of interest which occurred in their practice, from an erroneous supposition on their part that it is necessary to work them up into the form of an elaborate essay. In nothing are they more deceived; the plain and truthful narrative of a single fact is of infinitely more value than a thousand theories. Wisely then, did this Association when they met last year at Halifax limit the time for the reading of papers to a short time, by which I trust many members will be induced to send in communications which otherwise they might not feel disposed to do. It is only therefore in an Association such as this that the accumulated experience of a large body of the medical profession in this Dominion can be properly collected and concentrated so as to turn such inestimable stores of knowledge to good account, and to render them available and useful to the profession at large. When we glance over the medical literature of former years, not only of Great Britain and the continent but of the United States—what, I would ask, are the works which have stood the test of time, and which among the numerous changes produced by improving and increasing knowledge are still "lasting monuments," while systematic and, for their time, learned works have long since sunk into oblivion? —it will be found that those simple records of the experience of long lives, devoted with ardent zeal to the cultivation of medical knowledge retain their value into the present moment, and will doubtless continue to be consulted and referred to by succeeding generations, as mines of invaluable practical information. Now, if the practice of one man, as in the case of Hunter, Harvey, Smellie, and a host of others, can produce recollections of facts which have immortalized their names and conferred lasting benefits on every department of the healing art, how much more useful and important will be the combined efforts of hundreds of fact-collectors, concerning all the results of their practice and their observations, thrown into one great depository, viz.: the Canadian Medical Association.

There is another point which I must not omit, I mean the effect these meetings have on our social position. It brings

together the members of the medical profession, it enables us to know each other, it binds us together with a social band which must ever be not only a source of sincere satisfaction but of mutual improvement and advantage. The friction of different minds earnestly engaged in similar pursuits is peculiarly valuable, for it is scarcely possible for any man who has been moved by the same impulses, agitated by the same fears, excited by the same hopes, and elated by the same successes, who has felt the responsibilities, and experienced the hours of painful anxiety in the treatment of difficult and dangerous cases, not to derive consolation and benefit by consultation and communication with his professional brethren."

Allusion was then made to some recent discoveries in Medicine, Surgery and Midwifery, and finally he mentioned and commented on the names of distinguished medical men, who had died during the last year.

PRIZE ESSAYS.

On the report of the Committee on Prize Essays being called for,

Dr. TRENHOLME, Montreal, asked, if any prize was offered.

The General Secretary said Dr. Grant offered a medal for three years, but no one competed for it.

NOMINATING COMMITTEE.

Dr. THORBURN proposed that the following form the Nominating Committee. Drs. Canniff, Trenholme, Robillard, Zimmermann, Temple, Rosebrugh, Strange, Osler, David and Thorburn.

Dr. WORKMAN then read an excellent paper on Criminal Insanity, commenting on the recent McConnell case. This paper is we believe, to appear in one of our Western contemporaries.

TREASURER'S ACCOUNT.

Messrs. Oldwright and Trenholme, auditors, reported that they had found the Treasurer's accounts and vouchers correct.

OVARIOTOMY.

Dr. STRANGE of Aurora, read a paper on Ovariotomy, in which he advocated strongly the treatment of the pedicle with

the actual cautery. A discussion ensued in which several members participated. Dr. White, of Buffalo, moved a vote of thanks to Dr. Strange for his very interesting paper, after which the Association adjourned till 8 o'clock, p.m.

EVENING SESSION.

Eight o'clock was the hour for re-assembling, but the doors were not opened until 8.15, and the chair was not taken until 8.30, p.m.

PHYSIOLOGY OF MENSTRUATION.

Dr. ROSEBRUGH read a paper on the physiology of menstruation, and produced specimens of membranes cast off from the uterus of a patient of his while menstruating, for the consideration of the Association.

Dr. OSLER offered a few remarks on the subject, which was then dropped.

VITAL STATISTICS AND PUBLIC HYGIENE.

Dr. CANNIFF moved, seconded by Dr. Trenholme, "That the following Committee be appointed to prepare a memorial to the Dominion Government with respect to vital statistics and public hygiene:—The President, Drs. Hingston, Workman, Clarke, Playter, Canniff and Oldright."

Dr. RIDDELL thought the first question to be decided was whether the subject of vital statistics came within the scope of the Dominion Parliament or Provincial Legislature. In old Canada a law prevailed calling for certain statistics to be made to the Board of Statistics, but one of the first acts of the Ontario Legislature was to do away with the obligation to send statistics to Ottawa and to provide that such should be sent to the officers of the Provincial Government. In the Act of last session the Ontario Legislature provided that the statistical returns should be made to it and not to the Goverment at Ottawa. In asking the Dominion Government to deal with the subject, he feared the Association was ignoring the rights and privileges of the different Provinces.

Dr. TRENHOLME, Montreal, reminded the meeting that Dr. Brouse had introduced a Bill on the subject in the Dominion Parliament last session.

Dr. Hingston concurred in the opinion that the difficulty in dealing with the subject arose from the circumstances of the question of jurisdiction not being decided. If, however, medical men united on a common system of registration, some plan might be adopted by the different Governments to have it carried into effect.

Dr. Canniff advocated the adoption of the motion on the ground that it was necessary to educate the public mind regarding public hygiene.

Dr. Playter thought the view entertained at Ottawa was the establishment of a central board for the collection of statistics for the Dominion.

Dr. Workman feared that such a scheme would involve the preparation of duplicate returns for the Dominion and the Province.

The President suggested that the Association should co-operate with the medical men of Quebec in pressing the subject on the attention of the Dominion government.

Dr. Hingston remarked that while nothing had been done by the Ottawa and Ontario Governments, the Quebec Government had introduced a bill on the subject, even though it was not so complete as it might be desired.

Dr. Sloane said the registration system of Ontario was as complete as the Government could make it, but they had not yet received that co-operation from medical men which would render it completely successful.

The motion was carried.

The Association then adjourned till 10 o'clock to-morrow (Thursday) morning.

SECOND DAY'S PROCEEDINGS.

The second day's proceedings of the Canadian Medical Association opened at ten o'clock yesterday morning, Dr. Hodder again presiding. The minutes of the last meeting were read and confirmed.

VITAL STATISTICS.

Dr. RIDDELL laid on the table the various Acts with reference to vital statistics, which showed that the Province of Ontario assumed all rights with regard to the collection of statistics. He presented the copies of the Acts. He also produced copies of schedule of registration of births, deaths, and marriages.

Dr. HINGSTON considered himself very much indebted to Dr. Riddell for the inquest he had held on these Acts. He called it an inquest because he believed the state of matters to be such that the registration of births, deaths, and marriages was not properly carried out.

PAPERS READ.

Dr. GEIKIE read a paper on gastric ulcer, in course of which he gave an account of a case of that kind in which he was engaged.

The case was discussed by several of those present.

Dr. TRENHOLME read a paper on Clinicology, and gave the outlines of some important advances which had been made during the past few years. In treating of uterine diseases he commented on the keeping of late hours, dancing, etc., which were taking away the health and beauty of our young women.

A short discussion followed on the subject of tumours, after which the Association adjourned till the afternoon.

The Association re-assembled at two o'clock.

ANTISEPTIC SURGERY.

Dr. GRASETT read a paper on the principles and practice of the Antiseptic system of treating surgical cases so as to prevent the occurrence of putrefaction of the part concerned. The guiding principle, the germ theory of putrefaction, was explained, and the numerous forms of life which spring from fermenting and putrefying fluids were attended to. Passing from the discovery of the germ theory in 1830 by the observation of vital germs in yeast and the belief in the existence of germs of minute organism in the atmosphere, several experiments by Dr. Lister, of Edinburgh, were described and commented on, the opinion

being expressed that the results of the experiments were strong evidences of the truth of the theory. The most successful antiseptics were carbolic acid, salicylic acid, and chloride of zinc, and the only means of successfully treating antiseptically was by paying attention to the minute details recommended to prevent the germ from taking possession of the wound. The various wounds in which antiseptic treatment was necessary were enumerated, and they include the lancing of abscesses, the incision of the knee-joint, and the treatment of compound fractures. The value of the treatment was dwelt upon at length, and he (Dr. Grasett) expressed his belief in it.

Drs. Workman, Hingston, Canniff, Ross and Hornibrook took part in the discussion which followed, and a vote of thanks was tendered Dr. Grasett for his paper.

OFFICERS.

The Nominating Committee reported the nomination of the following officers for the ensuing year: President, Dr. Hingston, Montreal. Vice-Presidents—Ontario. Dr. Workman, Toronto; Quebec, Hon. Dr. Ross, Quebec; New Brunswick, Dr. Baird, St. John; and Nova Scotia, Dr. Moran, Halifax. Secretaries—Ontario, Dr. Zimmermann, Toronto; Quebec, Dr. Russell, Jr., Quebec; New Brunswick, Dr. Hannington, St. John; Nova Scotia, Dr. Almon, jun., Halifax. General Secretary, Dr. David, Montreal; general Treasurer, Dr. Robillard, Montreal.

Committees on the following subjects, were also nominated: Publications, Medicine, Surgery, Obstetrics, Therapeutics, Necrology, Medical Education and Literature, and Climatology.

The delegates to the International Medical Association were named as follows: Dr. Grant and Dr. Sweetland, Ottawa; Dr. Hingston and Dr. David, Montreal; Dr. Oldright and Dr. Fulton, Toronto; Dr. Marsden and Dr. Russell, sen., Quebec.

The delegates to the International Medical Congress, to be held in September at Philadelphia, were named as follows: Dr. J. Ross, Dr. F. H. Wright, Toronto; Dr. Macdonald, Hamilton; Dr. Grant, Ottawa; Dr. Brouse, Prescott; Dr. Workman, Toronto; Dr. Dixon, Kingston; Dr. Osler, Dr. Wilkins, Dr.

Craik, Montreal; Dr. Russell, jun., Quebec; Dr. Earle, St. John; Dr. Wickwire, Halifax; Dr. Canniff, Toronto; Dr. Yeomans, Mount Forest.

The nominations were accepted.

THE NEXT MEETING.

Dr. OSLER moved that the next meeting be held in Montreal, on the second Wednesday in September.

The motion was carried, and a Committee of arrangements was appointed.

MEDICAL EDUCATION.

Dr. HINGSTON read the report of the Committee on Medical Education, to the effect that as the question of medical education was under the consideration of the Legislatures of Quebec and Ontario, the Committee recommended that the education and examinations in the Provinces be the same, so that licentiates of one Province would have the privileges of the other Province.

The report was adopted.

VITAL STATISTICS.

Dr. HINGSTON moved, seconded by Dr. Canniff, that the Association was of opinion that the sanitary laws at present in existence in the Dominion were insufficient to meet the requirements of public health, and that a system of public hygiene must embrace an acquaintance with vital statistics; that the importance of that knowledge was recognised elsewhere, and that in countries not more favorably situated than Canada, systems more or less complete of vital statistics obtain, and sanitary laws had been enacted and enforced. The Association therefore prayed that if it were within the scope and power of the Dominion Parliament such a comprehensive scheme should be introduced as would supply a much felt want, and afford to the members of the profession throughout the Dominion, and other scientific persons, additional means of acquiring a more extended knowledge of the more prevalent diseases, and establishing a comprehensive law relating to public health.

The motion was carried.

The communications which were to have been read by Dr. Yeomans, of Mount Forest, and Dr. Oldwright, were, at the request of those gentlemen, deferred because of the lateness of the hour.

Dr. REEVE, Toronto, read an interesting paper on Otology or Aural Surgery, for which he received a vote of thanks.

VOTES OF THANKS.

The President then left the chair, after which the thanks of the Association were, on motion of Dr. Sweetland, seconded by Dr. Workman, presented to Dr. Hodder for his conduct in the chair.

Dr. TRENHOLME moved the thanks of the members of the Association to the Toronto members of the Association for the reception they had given to their visitors.

The motion was seconded and carried unanimously.

On motion of Dr. WORKMAN, seconded by Dr. Rosebrugh, votes of thanks were passed to the General Secretary, Dr. David, and the Treasurer, Dr. Robillard.

The Association then adjourned.

EXCURSION TO COUCHICHING.

At the invitation of the medical men of Toronto, the members of the Canadian Medical Association, which has been holding its annual meeting in this city, yesterday took a trip to Lake Couchiching. At 8 o'clock a special train consisting of a locomotive, three ordinary and two drawing-room cars left the City Hall Station of the Northern Railway, for Belle Ewart. The party numbered 150, fully half of whom were ladies. The Band of the Tenth Royals, under the direction of Mr. Toulmin, was on board, and performed a select programme of music during the journey. At Belle Ewart the party left the train and embarked on the *Lady of the Lakes*, which conveyed them to Couchiching. The weather was delightful though a trifle warm, and no unpleasant swell disturbed the equanimity of the ladies. The charming scenery of Lake Simcoe was generally admired, and when after passing the Narrows, a view of Lake Couchi-

ching was obtained, it was admitted that no more charming summer resort could be found in Canada. The excursionists landed at the pier, and proceeded to the Couchiching Hotel, a handsome and commodious wooden structure, situated in the midst of tastefully arranged grounds, which occupy an extensive promontory facing the rising town of Orillia.

At half-past two the party sat down to an excellent dinner, which was served in Mr. Scully's best style. The chair was taken by Dr. Hodder, President of the Association.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Malignant disease of the peritoneum complicated with Phthisis pulmonalis. Under Dr. DRAKE. Reported by Mr. C. S. MURRAY.

M. S., about 60 years of age, of medium height, very emaciated, of a cachectic appearance, was admitted into the Montreal General Hospital on the 25th Sept. 1875. Her history could not be obtained. On admission she was in a very weak state, complained of great pain in the bowels, vomited a few times. Had a slight cough but did not complain of any pain in her chest or distress of breathing. Abdomen moderately distended by ascitic fluid. No anasarca. Over the pubes a firm non-sensitive tumour was felt. On examination per vaginam a similar firm non-sensitive tumour was felt through the upper wall of the vagina; a tumour of similar character was felt on examination per rectum. When this was pressed by the hand over the pubes, or by the finger in the rectum, it gave a sensible impulse to the finger of the other hand placed on the os uteri. Length of the uterus was $1\frac{3}{4}$ inches. The existence of two fibroid tumours was diagnosed. She was ordered the Chronic Pectoral mixture of the Hospital. She presented well-marked signs of pulmonary phthisis, and died six days after admission.

Autopsy, 4 hours after death. No rigor mortis, body warm,

skin dirty yellow, conjunctiva yellow, abdomen moderately distended, lineæ albicantes faintly marked, axillary glands not enlarged, no cancer of the breast.

Brain, normal; liver, normal; spleen, congested; left kidney, healthy; in the upper part of the right kidney was a firm cancerous nodule, of the size of a bean; in the inferior extremity was a similar small nodule the size of a pea. Each of these was situated at the base of a pyramid.

Pancreas, healthy.

Lungs.—In the apex of the right lung was a large cavity with membranous walls; the rest of the lobe and the middle lobe were infiltrated with caseous spots. The inferior lobe was congested, crepitant. In the left apex was a small cavity the size of a walnut filled with yellow caseous matter. The whole of the superior lobe and upper part of the inferior lobe were infiltrated with spots of degeneration, about the size of split peas. The intervening tissue was dense and fibrous. No miliary tubercle noticed. Extensive pleuritic adhesions existed all round both lungs.

Heart.—All valves competent but the mitral, the smaller segment of which was thickened and puckered. Left ventricle firmly contracted. Right heart and inferior vena cava filled with dark grumous blood. 5 oz. of clear fluid in the pericardial sac.

Peritoneum.—35 oz. of a greenish fluid in the peritoneal sac. Both visceral and parietal layers were studded with numerous cysts with their walls, of the size of hazel nuts, filled with a clear colourless fluid. On the parietal layer, mesentery and omentum were numerous small soft sacs or irregular tubercular elevations, 3 lines high, filled with a thick yellow substance, which under the microscope was seen to consist chiefly of large oval cells, with two or three nuclei. These small masses had coalesced and become matted to form a somewhat nodulated soft lamina over the upper surface of the liver and spleen, in the iliac fossa and pelvis. Scattered over the omentum were several small tumours, and one larger one about the size of a pigeons egg, firm, hard, of a cancerous nature. The omentum

was contracted, puckered, and reduced in size. There was thickening and matting together of the peritoneum, forming the broad ligaments, but no adhesions existed between the peritoneum and the viscera of the abdomen ; the intestines and stomach were unaffected.

Uterus.—A globular tumour about the size of a man's fist was situated in the anterior wall of the uterus, separated from the muscular substance which surrounded it by a capsule of loose connective tissue, so that it could readily be enucleated. This tumour, which involved the whole anterior wall, extended upwards and caused slight anteflexion of the body of the uterus. On section, the exposed surface varied from whitish to a grayish color ; firm throughout. It consisted chiefly of bundles of fibrous tissue interlaced with one another in an irregular manner. The pressure of these bands threw up ridges upon it, so that the surface was uneven. The walls of the uterus were of normal thickness, and the length of the cavity was increased to the extent of a quarter of an inch. A small subperitoneal fibroid the size of a marble was situated on the posterior surface of the large interstitial one, connected to it by a short oval base about 2 lines thick. Anteriorly at the junction of the body and neck there was a small interstitial fibroid ; two larger ones, the size of walnuts, also interstitial, were situated one in each angle, occluding completely the Fallopian tubes. Another smaller fibroid was situated in the left wall of the cervix and immediately behind it was a small sub-serous one. These tumours are similar in appearance to the one described. Rugæ of the cervix were distinctly marked. Os externum small. The vaginal portion of the uterus smaller than normal. Both Fallopian tubes were occluded by the tumours situated in the angles, and were thickened and hardened. The right ovary was completely replaced by three or four separate cysts, containing fluid of the consistence of water ; collectively they were equal in size to an orange. The left ovary was replaced by an old abscess with thick irregular walls, having in places fibrous trabeculæ connecting the adjacent parietes. When removing the uterus the posterior wall of this ulcer was ruptured and a small quantity

of thick yellowish pus escaped. The tissues forming the broad ligaments were matted together and thickened, the peritoneum being covered with the same cancerous deposit as was observed in other parts.

Glioma of the Corpus Striatum.—Autopsy.—Under Dr. Ross. Reported by Mr. R. L. MacDonnell.

M. M., æt. 60, admitted to the Montreal General Hospital July 23, 1875, under Dr. Ross.

Is mother of a large family, and has always been of temperate habits. No history of syphilis. In good health and perfectly sane up to a month ago. Was then observed to act in a strange manner. Became irregular in habits. Assumed at times a sleepy, stupid air, so much so that her friends at first thought she was drunk. Evinced desire to steal and secrete articles of no use or value. On one occasion attempted to set her bed on fire. Became subject to involuntary passages of urine and fæces.

On the day of her admission, she was dull and stupid; could not answer correctly the simplest questions; regarded everybody with a peculiarly vacant stare; voice thick and husky, like that of a drunken man. Could give no information whatever, as to the history of her ailments. Can hardly be kept in bed, falls or slides out of it to sit or lie on the floor; occasionally hides, under the mattress or pillow, all articles within her reach. Is highly emotional, laughing or crying on the slightest provocation. Left leg paralyzed from hip downwards. Pupils, rather contracted, answer to stimulus of light, and are of equal size. Urine and fæces pass involuntarily.

Pulse, 56, full and regular. Radial artery tortuous but not stiffened. Temperature, 97°. Urine darkish in colour, contains mucus and pus corpuscles with a very small percentage of albumen. Sp. gr. 1.018.

Ordered to take potassii bromidi, gr. xv. three times a day. Also a white draught.

July 28th.—Motor paralysis of right side apparent to-day.

Facial nerves unaffected. No twisting of mouth or protrusion of tongue to wrong side noticed to-day. Patient very stupid: can scarcely articulate.

July 29*th*.—Pulse and temperature unchanged. Breathing stertorous. Unable to speak or protrude the tongue. Can open the eyelids at will. Pupils contracted but equal in size; Pulse 60.

July 31*st*.—Right eye less sensible to touch than left. Left pupil more dilated than right. Neither affected by light. Clonic spasms of muscles of the left side. Pulse 60. Temperature 97·4°. Equal on each side.

Aug. 1*st*.—A little improvement. Can swallow well. No more spasms.

Recognized her son who had come to see her, and cried on his departure, though unable to speak to him.

Remains in bed without constraint. Pulse 80. Temperature 97·6°.

Aug. 8*th*.—Condition improved. Spoke once or twice with distinctness. Can answer questions correctly by "Yes and No."

Aug. 11*th*.—Again stupid and somnolent. Urine unchanged. Pulse 90, small and weak. Right and left axilla show a difference of temperature. Right 99·0°. Left 102·0°.

Aug. 12*th*.—Died late last night.

Autopsy.—Brain generally firm.

Arachnoid thickened along line of the vessels. Slight effusion between dura mater and arachnoid. Arteries of circle of Willis, enlarged, atheromatous and calcified. Right internal carotid large and more calcareous than left. Puncta vasculosa numerous and large. Pinkish discoloration along the margin of the gray substance in the centrum ovale majus. Lateral ventricles contain about four drachms of fluid. Anterior cornu of the right lateral ventricle flattened and atrophied. No distension. Fornix firm. Inflammatory thickening of lining membrane of corpus striatum. Under the outer lateral half of the corpus on the left side is a hard, well defined tumour, as large as a hazel nut, lying embedded in softened brain substance,

from which it could readily be enucleated. No distinct capsule around growth. Other organs healthy.

The tumour when separated was found hard and tough, white in colour and rather vascular. Having allowed it to harden in alcohol for several days, I examined it under the microscope, and found it to present the following characters. Sections from the outside of the tumour were composed of extremely small, non-nucleated cells, of equal size, very numerous, closely aggregated, and embedded in a matrix which in some places appeared to be composed of fine fibrillæ, while in other sections it was homogeneous. Every here and there was the cut end of a fine capillary vessel. The microscopic structure of the interior of the growth was slightly different. The distinction between cells and matrix was not so well marked, and the tumour appeared to be undergoing some process of disintegration.

From these characters it may be inferred that it is a glioma.

Reviews and Notices of Books.

Medical Thermometry and Human Temperature, By E. Seguin, M. D.—New York, Wm. Wood & Co., 1876.

This is the second edition of this work. It is however our own first acquaintance with it, and we feel sure that there are also many of our readers who are in ignorance of its existence. For this reason we may extend our remarks further than is usually necessary in the case of works which have already undergone previous editions.

Dr. Seguin is a profound enthusiast on the subject of which he writes, and having devoted many years to the accumulation of innumerable observations and much thought to the scientific elaboration of this material, he is enabled to furnish us with an amount of concentrated information which is truly surprising. Besides which, it is at once visible to the reader that he is a most advanced thinker, and every page is found to contain suggestions very striking, from their originality, and from the comprehensiveness of their grasp.

In accordance with its title, the work is composed of two essentially distinct portions. The first deals with medical thermometry, that is to say, the science of observing and appreciating abnormal temperature in disease. The second, on human temperature, discourses on the norme of the human temperature, under varying conditions, the relations this bears to the other vital functions, the importance of pyrogenic observations for social, educational and other purposes.

After a short historical notice of the origin of the practice of thermometry, showing how much of our present knowledge is, strange to say only an "Hippocratic renaissance"—the author proceeds to show by what means the physiological temperature is maintained and to what variations it is subject. Then follow chapters upon the temperature waves which are found in various diseases. The list of these is extremely complete and in every case it is attempted to be shown how far we may be guided in our diagnosis and prognosis by the thorough and frequent use of the clinical thermometer. All these chapters are embellished with numerous carefully executed charts exhibiting the typical curves together with examples of the more exceptional varieties of these. Dr. Seguin everywhere claims for thermometry superiority over every other means of diagnosis and persistently urges the recognition of its claims—holding its great attraction to be that it is an instrument of *Positive* Diagnosis as contrasted with those of *Physical* Diagnosis—the latter requiring the intervention of our educated medical senses to interpret their reports, the former mathematically indicating the phenomena which our senses cannot reach. "Of all recent improvements," he says, "none will be so potent to give medicine a place among the Positive Sciences as its adoption of thermometry."

The author urges the adoption of a new thermometer for observations on human temperature—one which he calls the Physiological Thermometer—this is to have its zero at the norme of the human adult, viz: 98.6°F= 37°C—and to have a graduated range downwards of 7°C, and upwards of 10°C. The general adoption of such an instrument by the profession

would undoubtedly save a great deal of the present confusion which arises from the diversity of the scales in use in different countries. Besides which, it would simplify much the observations to be recorded by lay persons whose assistance in this practice is almost essential to us.

It is also recommended to us to accustom ourselves to the use of the surface thermometer and thermoscope. Without doubt these aids are invaluable for careful scientific observations in hospital wards, but we doubt if they will readily be adopted in ordinary practice.

The chapters on thermo-therapeutics and apyretic medication are particularly interesting. Every one now admits that one of the greatest of modern improvements in therapeutics has been the systematic and persistent employment of measures calculated to maintain the body at a point as near its norme as possible. Much is already known of the application of these means, but very much more has yet to be learnt. It is the primary duty of every medical man to make himself conversant with the rules and regulations which are capable of guiding this fundamental portion of his management of all febrile complaints. A very full and able account is here given of the various ways in which water is to be used as a carrier of temperature whilst attention is also fairly directed to the important part played by food in governing the temperature of the body. Apyretic drugs are also noticed.

The special application of thermometry to Life Insurance, and to the supervision of the health of schools is then shortly dwelt upon.

Our author would be for having the "thermometer in every family"—and he would educate every mother in its use. He would make her "love, study and trust the little magician who like the finger in the fairy tale, tells things that nobody can know otherwise, with it she will give us a trusty account of the condition of her patient. During our absence, her hand will be our hand, her eye our eye."

This work should be read by every practitioner desirous of keeping well informed of the present status of his science in all

its branches. It is a complete compendium of our present knowledge of this important and interesting subject. It is written in clear, concise, philosophical language, and is closely and convincingly argumentative throughout. The confidence of the author is found to be unbounded in the great future that stretches out before the science of Thermometry, and it must be said that it is almost impossible to read Dr. Seguin's confident predictions without becoming a sharer to some extent in the enthusiasm he exhibits.

A Contribution to the Medical History of our West African Campaigns.—By Surgeon-Major Albert A. Gore, M.D., late 34th Regiment; Sanitary Officer on the Staff of the Quarter-Master General's department during the Ashanti war of 1873. 8vo. pp. 218. London: Baillière, Tindall & Cox, King William street, Strand, 1876.

Surgeon-Major Gore has given us in this brochure a highly interesting account of military service on the West Coast of Africa. In a very readable form he mentions many facts of deep interest and value in connection with the efficiency and health of the soldier in the malarial districts of Western Africa, and proves beyond doubt the possibility of a successful campaign, in that unhealthy climate, by the rigid enforcement of hygienic rules and regulations.

Until quite recently the medical profession in the army occupied a most unenviable position. Being non-combatants and junior in rank, physicians frequently found themselves quite unable to carry out practical suggestions which were of paramount importance to the success of a military enterprise. This, we should judge was a prominent cause of the want of success of the various campaigns undertaken against the Ashantee and other tribes in the early part of this century—the troops having to stand on the defense, being unable to strike a severe blow on the enemy, by marching inland and destroying their towns—perhaps the natives of Africa depended on the nature of their climate as their principal safeguard. This, however, will

no longer hold good, since the very successful campaign under Sir Garnet Wolseley, the curtain has been raised, and the Ashantee is fully alive to the fact that the European if he pleases can traverse his jungle and reach his sacred retreat without let or hindrance.

The book is divided into eighteen chapters. In the first chapter we have an account of the early medical history in which we learn that a European regiment, of ordinary strength, serving on the coast of Africa, would die out in the brief space of four years, whereas native troops serving side by side with their white comrades, lost on an average 3.72 per cent per annum.

In the second chapter we have a resumé of later military and medical events, and in this chapter the author has vividly laid before us what the station was at the time of the beginning of the campaign of 1873. With such an amount of filth, squalor, neglect of ordinary everyday cleanliness, and a tropical climate as is described by Dr. Gore, the wonder is that any European could survive four years of military service. After the Ashantee campaign was determined upon, and before the arrival of the troops, or at least before they were permitted to land, the strictest sanitary rules were enforced, proper barrack accommodation secured, and advantageous camping ground selected. There appears to have been no clashing of authority. Every man had allotted to him his own proper work, and as a result the troops were led on to Coomassie without interruption, completed their work, and were again landed in England before the middle of March, having accomplished their task after a stay in the country of barely two months.

In chapter eight, the author discusses the use and abuse of a spirit ration. He alludes to the benefits to be derived from a judicious use of alcohol, pointing to its true value when given under proper supervision, and when taken in moderation and at the proper time.

There is an excellent chapter on the medico-chirurgical lessons of the campaign. The author is of opinion that quinine given as a prophylactic against attacks of remittent fever

failed. That in many persons a tolerance of the drug resulted, and as a consequence it had not the same decided effect in cutting short an attack of fever when administered as a remedy. So that the premature use of quinine would seem to impair its curative action.

Space will not permit our giving this interesting work a more extended notice. It is, however, a valuable addition to the store of knowledge already given in the Army Medical Report of 1875, and should be in the hands of every medical officer who is liable to undertake service on the west coast of Africa.

Pathology and Morbid Anatomy. By T. H. Green, M.D., (Lond.), Second American from the third English edition, pp. 316. 8vo.: Philadelphia, Henry C. Lea, 1876.

Dr. Green's manual is now so well known that detailed criticism is unnecessary. It will be sufficient to call attention to the fact that in this edition the whole work has been thoroughly revised, much new matter added, and the number of original illustrations increased. As a hand book for students the work stands unequalled in this department.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Torsion versus Ligature of Large Arteries.—At the meeting of the *Société de Chirurgie*, held March 22nd, 1876, Tillaux advocates the torsion of large arteries instead of ligature, after amputation.

In five years he had practised torsion of arteries heretofore considered too large for this means of preventing hæmorrhage, in more than one hundred cases.

He only finds it necessary to use one pair of forceps, and with these he twists the end completely off the artery. The end of the artery must be grasped obliquely, not in the direction of its long axis.

Since T. has employed this method he has never seen secondary hæmorrhage, and he finds that it facilitates healing by first intention. He convinced himself that the torsion of large arteries would be a safe procedure by experiments on the cadaver.

In some of these experiments he cut through the lower end of the femoral artery, and after twisting off the proximal extremity, forcibly injected the artery by means of a hydrocele syringe, inserted at Scarpa's triangle. The twisted end never permitted the escape of any water.

The anatomical investigation of an artery upon which torsion has been practised, shows that the outer coat separates from the two inner, to the extent of about $\frac{2}{5}$ of an inch, and tapers off to a point. Within this cone the inner coats are retracted and turned in towards the axis of the vessel so as to form a real valve upon which the usual thrombus is formed, and gradually becomes inseparably united with the inner coat.—(*Quoted in the Berliner Klinische Wochenschrift, No.* 31, 1876.)

On Parametritis.—The Ætiology and Treatment of Parametritis.—By Dr. S. H. Kisch of Prague, Physician to the Marienbad Water Cure Establishment, &c.

Gynæcologists have recently given much attention to the subject of inflammation occurring in the mass of connective tissue, which abounds at the sides of the upper end of the vagina and the lower part of the uterus, contributes largely to the formation of the broad ligaments, and is remarkable for its rich supply of blood-vessels and lymphatics. All writers on this subject agree that the puerperal state is the most frequent cause of Parametritis, and some go so far as to assert that it seldom or never occurs under other conditions. The latter view is not only held by certain English Gynæcologists, but has also recently been advanced by a distinguished German author, Professor Schroeder, who in his admirable work on "The Diseases of the Female Organs of Generation," says: "Parametritis is rarely met with excepting in the puerperal female, but whenever it does

otherwise originate the cause is generally to be found in some surgical operation on the vagina or cervix uteri. Any cutting operation done on the cervix uteri may give rise to Parametritis, as may, also, its dilatation by means of sponge tents, the pressure of which upon the mucous membrane causes absorption of offensive secretions. In short, whenever there is abrasion of the epithelial lining of the cervix, so that the subjacent connective tissue is exposed to the influence of septic material, Parametritis is liable to ensue. Any traumatic injury of the cervix may give rise to perimetritis, *but not to Parametritis unless infection of the wound has taken place.*"

For some years past I have in my practice repeatedly had opportunity of observing inflammation of the periuterine cellular tissue result from very slight injuries, and I cannot coincide with the opinions of those English authors who hold that Parametritis is a phlegmonous inflammation of the pelvic cellular tissue which is invariably secondary to the absorption of septic material. In my experience the exciting causes were want of skill in the application, or too much force in the use of vaginal douche, and imprudence in the matter of exercise after stimulating hydropathic procedures.

The persons in whom Parametritis occurred were women suffering from various alterations in the form or position of the uterus as well as ulceration of the cervix, and extreme irritability of the sexual organs.

In the last three years I have seen fourteen such cases of Parametritis traumatica occurring in women from twenty to thirty-two years of age.

In eleven cases it was caused by the use of a vaginal douche which permitted the flow of too large a stream of water from too great a height, and at too high a temperature; the other three cases were caused by taking violent exercise immediately after the use of the earth, and mineral water baths, (*Moor–und Säuerlingsbäder*). In all these cases the local inflammatory infiltration was accompanied by general febrile disturbance. The local symptoms being preceded from 24 to 40 hours by high temperature, rapid pulse and sometimes by a sharp rigor.

The local symptoms were a feeling of weight and pain in the pelvis, especially when not at rest; discomfort at stool and in micturition, and great sensitiveness of the genital organs when examined. The vaginal mucous membrane felt warmer and moister than normal, and was unduly sensitive.

The inflammatory infiltration appeared as a soft doughy, diffuse and sensitive swelling, situated chiefly at the side of and behind the cervix uteri, but shading off into the broad ligaments. The uterus was always less movable than normal, and in some instances it was quite firmly fixed.

In three cases there appeared not only to be Parametritis, but also an extension of the disease to the pelvic peritoneum.

Febrile symptoms lasted from two to eight days, but the local phenomena continued from one to three weeks, excepting in the three cases last mentioned, where they lasted more than six weeks. The disease always ran a favourable course, and in every instance terminated in complete recovery.

From the foregoing I am inclined to think that Parametritis traumatica occurs rather frequently after slight injuries to already irritable or diseased female sexual organs, but that it runs a favourable course and terminates in speedy recovery, especially when the disease is limited to the periuterine cellular tissue. But to obtain this result a suitable antiphlogistic treatment should be instituted with as little delay as possible; in this connection I purpose to make a few remarks.

Authors are unanimous in recommending vigorous antiphlogistic treatment in pelvic cellulitis, some advise venesection, others are content with local bleeding by means of scarification, leeches and dry cups, but strangely enough they all seem to have overlooked the very best antiphlogistic remedy, that is, the use of cold. In my experience there is no other remedy so reliable as this when used early and in an appropriate manner in traumatic Parametritis, for it will arrest the progress of the disease and bring about resorption in the shortest time possible.

I do not make use of cold water injections, which I consider injurious in all inflammatory affections of the sexual organs, because the water itself acts as an irritant independently of the

mechanical force which it exerts upon the parts, but I apply dry cold by means of my vaginal irrigator, which is a sort of metal speculum placed in the vagina and so arranged that a constant stream of cold water may be conducted through it, and thus cold is applied to the vagina without moisture. — (See *Wiener Med. Wochenschrift*, 1870.)

I make the applications from three to six times daily, according to the severity of the symptoms.

In addition to the local application of cold the patient requires to be kept completely at rest. Occasional purgatives are advisable, and the free action of the kidneys should be sustained by drinking plenty of cold water or soda water.

The purgative I prefer is Infus. Fol. Senna, with a carminative to prevent griping.

Cold water clysters I consider objectionable, though less so than the cold vaginal douche.

If, when the acute symptoms have subsided the exudation does not show signs of undergoing resorption, but becomes firmer and the inflammation assumes a chronic form, the cold applications are no longer indicated, and must be replaced by warmth, which is best applied by means of earth poultices to the abdomen, frequently renewed ; the latter by their concentrated warmth, are the most efficient aids to absorption, and they act on the skin as powerful derivatives.

It is to be hoped these remarks may be the means of attracting more attention to inflammation of the periuterine cellular tissue ; in the continental water cure establishments at least many such cases have been wrongly classified as inflammation of the uterus or peritoneum, in consequence of the injudicious use of baths, douches, &c.

If the attending physicians at such establishments are familiar with the science of Gynæcology, and will take the trouble to make a careful examination whenever pain in the pelvis is complained of in connection with general febrile reaction, the diagnosis of Parametritis will more often be established ; but, on the other hand, the disease will occur less frequently in such establishments when more care and discretion is exercised in the use

of vaginal douches and other similar local remedies.—(Quoted from the *Berliner Klinische Wochenschrift*, No. 31, 1876.)

Phosphorus in Nervous Diseases.—By E. LEMAIRE.—After having devoted some pages to the history and physiological action of this drug, as well as to the pharmacology of the same, the author explains its principal therapeutical applications, based upon 73 cases.

I. In paralysis subsequent upon acute diseases, and ataxo-adynamic fevers, as well as hysterical paralysis and that from exposure to cold, phosphorus possesses no special action. The same may be said of paralysis the result of cerebral softening or a cerebral hæmorrhage of a certain extent. But in a paralysis following a hæmorrhage of limited extent, and which has not produced too much disturbance in the nervous system, phosphorus seems to assist and hasten the cure, even when the palsy has lasted for a considerable time, say, for example, for a year. But that the drug may exhibit its full action, it is necessary that all congestive and inflammatory symptoms shall have disappeared. Then we must begin with a dose of $\frac{1}{100}$ grain and gradually increase to a larger quantity, never going beoyond $\frac{1}{12}$ or $\frac{1}{10}$ of a grain.

In spinal paralysis, phosphorus is quite inert if the paraplegia be of very long standing and if it be connected with softening or advanced sclerosis of the cord.

II. In locomotor ataxia, the administration of phosphorus is sometimes followed by good results, inasmuch as it strengthens the patient, diminishes the incoördination of the movements, and seems to arrest the progress of the disease and keep it in a stationary condition for perhaps a long period.

It does not appear to have any beneficial action upon the lightning-like pains or upon the ocular disturbances of this disease; and it exerts a very varying influence upon the genito-urinary organs, since it sometimes excites sexual desires, and at other times has no effect of that kind at all.

Want of success of the phosphorus treatment seems to depend

upon several circumstances : 1st. Duration of the complaint. 2nd. The existence of symptoms of congestion of the spinal centres or of an excessive irritability of the nervous system. 3d. The existence of gastro-intestinal troubles, diarrhœa or vomiting, in which cases phosphorus is contra-indicated.

III. Phosphorus has been employed in lead and mercury-poisoning, and in poisoning by the fumes of carbon sulphide. In lead-poisoning it produces no effect, but in the two last it is often followed by very marked improvement.

IV. In paralysis of some of the ocular muscles, in incomplete amaurosis, in amblyopia not symptomatic of organic disease of the retina, in anaphrodisia, the results obtained are uncertain.

The author repeats that we must begin with a dose of $\frac{1}{100}$ gr. gradually increasing the dose to $\frac{1}{12}$ or $\frac{1}{10}$ grain which should be given in two separate portions, and during meal-time, because when fasting it gives rise to eructations of phosphorus odor, and is also more irritating. Besides, as this is a drug which is cumulative in the system, the treatment must be suspended at the end of ten or twelve days, to be recommenced some day subsequently.—(*Revue des Sciences Médicales*, 15 *Jan.* 1876.)

Congenital Absence of Rectum.—The subjoined case will be interesting, following immediately upon one somewhat similar, recorded by Mr. Howard Marsh in the *Medical Times and Gazette* of May 20.

On Tuesday, May 16, Dr. Bate sent a female child five days old, to see Mr. Maunder. There had been no evacuation from the bowel, but vomiting was frequent. The anus was well formed, and Dr. Bate, who had carefully explored this region with a scalpel, had failed to discover the rectum. Mr. Maunder extended the search, but also failed. He determined to open the abdomen through the left groin, with the hope of reaching the large intestine there.

Operation.—A longitudinal incision, about three-quarters of an inch in length and a finger's-breadth internal to the left antero-superior spine of the ilium, was made through the integ-

uments. The muscles and transversalis fascia were divided to a somewhat less extent, and the peritoneum least of all. A few drops of clear serous fluid escaped, and the bowel having a sacculated appearance presented. Half a dozen very fine sutures made of Chinese twist, fastened the peritoneal coat alone of the bowel to the edges of the wound. The intestine was now opened longitudinally to the extent of about one-third of an inch, and its contents escaped. The margins of the incision into the intestine were then stitched to the wound by four silk sutures.

May 23.—The infant is in capital health a week after operation.—*Medical Times and Gazette.*

Treatment of Diphtheritic Paralysis.

We give here the conclusion of Sir J. Rose Cormack's paper on Diphtheria and its treatment:

" The principles applicable to the dietetic and medical treatment of the general disease are also applicable to its paralytic sequels. So-called specifics are valueless. The system must be nourished and tonified—the plan adopted being based on rational principles, and carefully modified in accordance with signs, symptoms and results. Cod-liver oil, from its nature as well as from its easy assimilation, proves of signal benefit in arresting waste of tissue. Bordeaux wine is often at once food and physic in the paralysis of diphtheria; and in cases of flagging convalescence, it is of all wines the most recuperative, being alimentary and tonic, as well as stimulating. Sometimes it may be administered very largely; but it must always be given with the greatest discretion and watchfulness.

Iron is particularly indicated in diphtheritic paralysis, as the patients are always anæmic. There are few cases in which its administration does not prove itself in an obvious manner to be useful in a high degree. Sometimes it is only borne in very small doses.

Nux vomica, either in the form of extract or the liquor strychniæ of the British Pharmacopœia, taken daily, with some ordinary combination of laxatives, such as the compound rhubarb

pill of the British Pharmacopœia, ought to constitute a part of the treatment in nearly every case. It increases the peristaltic action of the intestine, imparts impulsive and retentive power to the bladder, and likewise has a general influence in improving innervation. The dose ought to be moderate, for large doses prove too exciting to the nervous system, and so tend to exhaust rather than invigorate its flagging powers. From half a grain to two grains of the extract once a day, with or without the occasional or constant addition of from five to ten drops of the liquor strychniæ two or three times a day, are suitable doses.

Local treatment is of the utmost importance with a view to direct towards the wasted and wasting muscles a greater supply of blood, and thereby improve their nutrition. Occasional blisters act very beneficially in this way; but they must not be relied on to the exclusion of the constant use of stimulating pastes or liniments. I do not know of any local stimulant more efficacious or better adapted for continuous use, than a ginger and mustard paste. The object of using the paste is to maintain a warm glow in the skin without vesicating it. The potency of the paste must therefore be proportioned to the susceptibility of the skin. By applying too powerful a stimulant to an extensive cutaneous surface, we may be obliged to suspend the local treatment, and so impede the progress of the cure. In some excitable patients who cannot bear long-continued counter-irritation of the skin, a gentle kneading of the paralysed muscles three or four times in the twenty-four hours will be found useful as a means of directing a supply of blood to them. In such cases, after each kneading, a moderately stimulating liniment containing a small quantity of laudanum may be applied with great benefit. The laudanum prevents an uneasy bruised feeling,which is often complained of after the kneading, and in irritable subjects is apt to induce restlessness and insomnia.

Galvanic excitement of contraction in the paralyzed muscles is often decidedly useful; but it is a measure which requires to be employed with moderation and at intervals of about twenty-

four hours. If resorted to too early, or too freely, it exhausts the nervous power of the affected muscles.

The principles of the treatment of diphtheria are precise and simple; and yet there are few if any diseases which more severely tax the patience, ingenuity and therapeutic resources of the physician. He has to devise and carry out innumerable little details which do not admit of description, and yet upon which success or failure may depend. He has also more frequently in this than in most diseases, difficulty in holding his own against the wishes of despairing affection, too eager to seek counsel from some special quack, or to try an infallible nostrum, which meddlesome ignorance has declared to have been successful in a "precisely similar case."

The modern neglect of Calomel. — My attention is called not unfrequently to the fact that there is an aversion at the present time to the employment of calomel in many cases in which it appears to me to be plainly indicated.

I shall presently illustrate my meaning, but I cannot forbear to remark that in the neglect of this drug a serious wrong is done to many patients, and a measure of speedy relief to numerous ailments is withheld.

I suppose that at least two causes are to be found for the present disuse of calomel. The first is almost certainly the fact that a large number of the most active practitioners of to-day were educated systematically and clinically in the belief that powerful medication of all sorts is an evil, that mercury in particular should be avoided if possible, or very cautiously administered, and that the laws of nutrition, the natural history of disease, and the *vis medicatrix naturæ* were better objects for study and observation. At all events, it may be stated that in the Edinburgh school some fifteen or twenty years ago, with some decided exceptions, however, and more than one London Hospital, this was the general drift of the teaching, flowing as it did from the remarkable advances in physiology, pathology and histology which characterized that period. In truth it is not too

much to affirm that a thread of scepticism as to therapeutics generally was woven into medical teaching at that time, and the effects of this are still manifested in various ways.

Secondly, notwithstanding this, and during the above-mentioned period, the list of the materia medica has been considerably enlarged, and many new drugs have been introduced into practice, and many improved preparations of old ones have been made.

Again, the views of many distinguished teachers have differed, and still differ, as to the value of mercurial medication in the treatment of syphilis, and not a few students have been educated of late years in the belief that mercury exerts no real power for good over syphilitic processes.

Much change of practice has likewise occurred in the treatment of acute inflammation during the last quarter of a century: thus pneumonia, peritonitis, and pericarditis were formerly systematically treated by calomel and opium; but the *nihilism* of homœopathy, and so-called expectant treatment showed what the natural history of these disorders really was, and enabled a more rational system of therapeutics to be evolved.

There is, I believe, little doubt that mercury gained undue reputation in the treatment of disease at a time when the diagnosis of visceral and other forms of syphilis was either not made, or was at any rate less exact than now, and when many disorders of a venereal origin were thus supposed to be inflammatory or idiopathic in their nature.

But I am not now about to discuss this or any other like matter.

Nothing is more certain in the history of medical art than that mercury was too freely and too often employed at the beginning of this century; but it appears to me that the reaction has been too extreme, and thus the disuse of mercurials has become with many almost a principle in modern practice.

What I now desire to call attention to is the neglect of mercurial medication in many so-called "functional" derangements of the body. And, as being uppermost in my thoughts, I mention first, as an instance which calls for this treatment,

cases of acute gastric catarrh, the conditions described by French writers as *embarras gastrique*, and but too well-known in all ranks of English life as "biliousness." As an accompaniment of many constitutional ailments, of acute inflammations, the continued fevers, the exanthemata, and rheumatic fever, it is commonly enough met with, while as a result of intemperance in food and strong liquors it is even more familiarly known. But the frequency of its occurrence in children, not always as a result of over-eating, but often ensuing, I believe, upon check to the functions of the skin from improper exposures, and insufficient clothing, is not fully appreciated. In these cases there is sometimes a remarkable degree of pyrexia present at some periods of the day, and several *pseudo-prodromata* of enteric fever may be noted. Indeed this catarrhal fever really constitutes a large part of the early trouble in many cases of the latter disorder. The same condition is also very common during active periods of dentition, when the catarrh is often more distinctly appreciable as a flux from the nasal or bronchial membranes, and may be, and often is, mistaken for the ordinary effects of cold.

Strong prejudice is met with sometimes amongst classes of patients who can descry the word "*hydrargyrum*" in their prescriptions, and its presence is held to savour somewhat of violent and effete practice, and of unwarrantable undermining of the constitution.

It is in response to some such feeling and objections as these that many practitioners hailed with satisfaction the advent of such a drug as podophyllin, which gained for itself, somewhat unwarrantably, as I believe, the name of "vegetable mercury." This drug, which is uncertain in action and often productive of griping, even when guarded with henbane and given with other aperients, generally requires to be repeated, and in this way time is lost, and the results are often far from being so beneficial as those which follow the action of a grain or two of calomel.

It cannot, I think be doubted that calomel, either alone or in combination with jalap, colocynth, or scammony, constitutes one of the most certain and efficacious purgatives, clearing the entire

portal system, producing a large flow of bile in the motions (though not manifestly acting as a strict cholagogue from the liver), and affording a measure of relief to the body unattainable by any other means.

To secure this result is a leading principle in the conduct of the catarrhal state above described. And besides this condition, I would adduce the cases of acute gout and of gouty dyspepsia, which are eminently well treated by calomel at the outset; so, too, many of the recurring congestive troubles of chronic cardiac and pulmonary disease are amenable to the same medication, care being taken to withold the drug in cases where there is manifest renal degeneration, since, as is well-known, mercury is ill borne under these circumstances, and may be mischievous.

Undesirable results would follow if mercury was frequently given in such cases as I have enumerated; but I only allude to the practice of employing it at the outset, and then it should be given boldly in doses of from one to five grains over night, once for all. In adults a draught may be given on the following morning, containing any suitable saline aperient, such as sulphate of magnesia or Carlsbad salt. This plan leads the way to a simpler or more specific course of treatment in any given case. I am satisfied that in many minor disorders of children nothing can take the place of calomel as a purgative, and much time is often lost by beginning with drugs that are accounted more simple. The only medicine that appears to me to approach calomel in value is castor oil; but this is constantly a source of trouble from its disgusting character.

I find that calomel is distinctly preferable to grey powder as a purgative, just as for other purposes strychnia is to milder preparations of nux vomica. Its action is smarter and more decided. It has also the great merits of being tasteless, and of exciting no nausea, and its bulk is small.

In strumous children, or in healthy ones who suffer occasionally from gastric catarrh, with tenderness and some tumidity of the liver, no medicine is comparable to a purgative containing calomel. After its action a copious bilious stool or two are passed, the tongue is observed to become cleaner, the feverish-

ness pertaining to this state subsides, and the child becomes brighter, and has restored appetite. A so-called simpler treatment with soda or citrate of potash will often fail to yield these results, and so too will repeated doses of rhubarb and senna. The constant failure of "nursery remedies" in these cases must have forced itself upon the minds of most practitioners, and, truly, by the time medical advice is sought the time for the administration of calomel has fully arrived.—Dr. Duckworth, *Practitioner*, July.

Treatment of Internal Diseases.—On the advantage of the introduction of large quantities of fluid into the bowels in the treatment of internal diseases, by Prof. F. Mosler, (quoted in Schmidt's Jahrbücher, Band 170 Hft. 2.)

G. Simon has many times observed in his experiments made on individuals suffering from fæcal fistulæ, that water injected into the rectum passes through the whole large intestine, and perhaps part of the small, without the least injury to the patient. Lately Prof. Hegar has devised a method of introducing fluid into the bladder and intestines without the aid of a syringe or force pump. His method is very simple and is as follows: for the bladder a catheter and for the intestines a tube is used with an olive shaped tip, to either of these is attached a piece of india-rubber tubing a foot and a half long with a glass funnel. In introducing fluid into the bowels the patient is placed in his hands and knees, to avoid pressure on the abdominal walls, the tube is introduced into the rectum and the glass funnel is raised a little above the level of the anus and the fluid to be introduced is poured into it and passes without difficulty into the intestines.

The patient should not be kept too long in his hands and knees as he will be liable to severe headache. In very weak patients and those suffering from fever it is impossible to keep them in this position for any time; in such cases, if the india-rubber tube is lengthened, the patient may remain lying on his back, and if the glass funnel be held high up there will be no difficulty in introducing the fluid.

A too rapid distension is to be avoided, by means of Hegar's "Irrigator," fluid is gradually and uninterruptedly introduced into the bowels. We know that the fluid has reached the cæcum by percussion giving a dull sound after the introduction of the fluid where before the sound had been quite tympanitic. Experiments were tried on the dead subject, as to how far the fluid penetrated by injecting fluid colored with anilin, but these experiments were without result owing probably to the want of tone in the bowel, which allowed it to be dilated to an enormous extent. In a patient who had a fistulous opening at the junction of the cæcum with the ascending colon Hegar's "Irrigator" was used, the patient lying on his back and on water being poured into the glass funnel it passed so quickly that in two minutes it came out of the fistula in a jet, so here was proof that by means of this "Irrigator" fluid could easily reach the cæcum.

As to whether the fluid can pass through the ileocæcal valve Prof. Dummann of Eldena has made numerous experiments on dogs and pigs. In dogs he found that the fluid easily passed the ileocæcal valve and for some distance into the small intestine. The experiments on pigs are of more use as their intestines resemble more closely the intestines of human beings; in them Prof. Dummann, by means of the "Irrigator" succeeded in introducing fluid into the small intestines with the greatest ease. Dr. Hoffmann, in cases of typhus and ulceration of the bowels, says this method is of use in washing out the bowels and in the cases where it was used the pain and flatulency immediately disappeared and that also in these cases the stools returned to their healthy condition much sooner than in those cases where the bowels were not washed out.

Furthermore that in cases of obstruction of the bowels this washing out has had the best results. It has also been found useful in Icterus (especially catarrhal) and in Cholelithiasis (gall-stone). In these latter diseases the treatment is based on the physiological fact that by injecting water into the bowel the bile secretion is diminished and from a viscid secretion it becomes thin and clear. * * * * This mode of treatment

is especially useful in Helminthiasis. It has been most successful in getting rid of worms whose habitat is in the large intestines as the oxyuris vermicularis, a tablespoonful of Liq. Chlori, or half a tablespoonful of Benzine to the quart of water being used as the injecting fluid. In tapeworm it has been found useful addition to the ordinary methods of treatment, after giving male fern or other vermifuges by the mouth, to inject a couple of quarts of water per rectum two or three hours after. —*Schmidt's Jahrbücher*, 1876.

Salicylic Acid as an Antipyretic.—By S. Wolffberg.—Wolffberg's work is nearly a complete refutation of the recent one of Buss. Wolffberg gives first the results with the trials of salicylic acid undertaken under the direction of Professor Ziemssen; then reviews the observations published by Buss himself, and does not admit that we can draw therefrom the same conclusions as the writer. Wolffberg holds that salicylic acid given in large doses, can, in many cases, lower the temperature of the patient—but it is necessary to give large doses—60 grains are not enough, and 90 grains are not too much. A dose of sulphate of quinine, therefore, does not find its equivalent in twice the quantity of salicylic acid, as Buss has claimed. Besides the effect of salicylic acid is of short duration. Wolffberg seems to compare it in several passages of his work to that produced upon the temperature by a tepid bath. And further, salicylic acid possesses this antipyretic action only in the milder forms of fever, in the more sure and intenser forms it remains quite powerless. To sum up, for certainty of action, safety and intensity of its effects, salicylic acid cannot be compared to sulphate of quinine, as had been maintained by Buss. And the criticisms of Wolffberg do not stop here. Buss had said that salicylic acid had exerted no irritant action upon the surfaces with which it came in contact. That the patient to whom he had administered it, showed no symptoms whatever of irritation of the digestive or the vesical mucous tracts. Wolffberg does not admit

these conclusions. A patient of his, treated with salicylic acid suffered from a bleeding pharyngitis, due to the medicine having been given in powder. In the case of another patiant who died during the treatment, there were found at the autopsy, ulcerations of the stomach and duodenum which could not be accounted for except by the caustic action of the salicylic acid. On the other hand, to support his own opinion by more numerous observations, Wolffberg administered salicylic acid during some days preceding their death, to three phthisical patients who were evidently approaching their end: on every occasion he found at the autopsy traces of an ulcerated gastritis. Besides, several of his patients complained during life of a sensation of burning in the region of the stomach. Again, Wolffberg after having given the salicylic acid to a dog, found the characteristic ulcerations in the intestinal tract. He concludes from all these facts, to which may be added those of Furbringer, that salicylic acid cannot be given internally either in powder or in draught, in which it is merely held in suspension. It should therefore be given in solution. Wolffberg has given it to some patients disolved in alcohol or glycerine, but obtained, from an antipyretic point of view, nothing but negative results; besides, small doses only could be given in this way. Lastly, he tried to treat seven cases of typhoid fever by means of the prolonged use of salicylic acid in solution, on the theoretic ground of utilizing the antiseptic properties of the acid for the destruction or the counteraction of the "(hypothetical) *materies morbi* which alters the constitution of the blood" in typhoid fever. These trials did not succeed.

In spite of the discouraging results obtained from salicylic acid in his hands, the author does not think that this therapeutic agent ought to be entirely given up. He proposes to utilize its antiseptic properties to the treatment of putrid fermentative processes in the digestive canal, especially the stomacho-intestinal catarrh of children, and secondly in the affections of the urinary passages, accompanied by an alkaline fermentation of the urine. —(*Revue des Sciences Médicales*, 15th Jan. 1876.)

Chloral in Tetanus.—A case recently reported in a French provincial journal will show the extent to which chloral may be administered in Tetanus.

In the present instance it had originated from an axe-wound on the finger and the trismus and paroxysms of tonic spasms were extremely well-marked. The treatment was begun by administering 45 grains of chloral in three divided portions at intervals of 10 minutes. Given in this way a similar amount (45 grains), was taken every 3 hours for 24 hours. At the end of this time the patient had regained power of movement over nearly all the previously affected muscles. The dose of chloral was then diminished to 30 grains every 3 hours. On the fourth day of this treatment the patient was observed to be somewhat cyanotic and constantly inclined to sleep. The dose was then diminished to 25 grains, with instructions to the attendants to double the dose if tetanic spasms again shewed themselves. For three days following, this dose was continued every six hours; then for one day, every 12 hours; and lastly for the remaining few days of treatment during which some slight spasms alone were experienced, once in 24 hours.

On the fourteenth day all tetanic symptoms had disappeared and the wound healed. Two months afterwards at the time of the report, the patient remained perfectly cured.—(*Bulletin general de Therapeutique*, *June* 30, 1876.

Hypodermic Injections—in glandular enlargement..—The *Practitioner* says that, in a recent paper, Dr. Jacubowitz, of Nagy-Karoly, starts from the principle that no inflammation to which a degenerative action is attributable is occasioned by the injections, but by this means a solvent of a non-irritating character is brought into direct contact with the glandular tissue. He avoids tincture of iodine, all alcoholic fluids, and carbolic acid, and uses instead a weak solution of iodide of potassium in the proportion of about one part to thirty of water. He gives two cases in which he obtained extraordinarily successful results. In one case he made a puncture into the

most prominent part of a gland which was enlarged to the size of a goose's egg, pushing the needle in obliquely to a considerable distance. After injecting about the fourth of the syringeful a resistance was felt; he then withdrew the needle for a short distance, penetrated a septum on one side, and again injected a quarter part. By repeating this process, he threw in about fifteen grains of the iodide in an ounce of water. The tumour almost immediately became harder, smaller and less painful. After four injections performed in the course of two days, the tumour gradually dwindled to the size of a hazel-nut, and ultimately vanished altogether. The second case was very similar. Here, however, two dark-blue bodies remained, which were so hard that it seemed to be impossible to inject them. Dr. Jacubowitz, however, injected hypodermically the iodide on two occasions, and with perfect success. Ten injections were required altogether. The small quantity of the iodide required to produce the effects observed is very remarkable.—*Medical and Surgical Reporter.*

Obliteration of Depressed Cicatrices.

Operation for, after Glandular Abscesses or Exfoliation of Bone. Mr. William Adams has performed this operation with great success. So many faces are rendered unsightly by these deep cicatrices, that any operation which results in the removal of the deformities must be a blessing to those afflicted by them. The operation is original. and consists in subcutaneously dividing all the deep adhesions of the cicatrix, by a tenotomy-knife introduced a little beyond the margin of the cicatrix, and carried down to its base, so as to carefully and thoroughly evert the cicatrix which remains prominently raised. Two hare-lip pins or fine needles are then passed through the base, at right angles to each other, so as to maintain the cicatrix in its everted and raised position, where it is so retained for three days. At the end of this time the needles are removed, and the somewhat swollen and infiltrated cicatricial tissue is allowed to settle gradually down to the proper level of the skin. He gives the

full history of three such operations in his paper. The permanency of the cure is illustrated by cuts of two cases, in one of which the operation was done nine, and in the other three years ago. The depressions seem to be completely obliterated.—*British Medical Journal.*

Ablation of the Cuboid Bone in Congenital Varus.—Dr. H. J. Little says the only cases where this operation can be performed are those where inveterate deformity exists, and which are curable by no other means. Infantile congenital club foot, he says, can, and ought to be, cured before the age of twelve or sixteen months, before the time a child commences to walk. If properly treated at that time, he thinks the use of splints and any mechanical aid will be unnecessary in walking.—*Brit. Medical Journal.*

Personal.

We are glad to see that H. L. Gilbert, M.D., ('75), has passed the examination for the M.R.C.S. He arrived by the last steamer, and purposes entering practice with his father in Sherbrooke.

L. Secord, M.D., ('76), has commenced practice in Philadelphia.

F. Sneider, M.D., ('76), has commenced practice in Rochester, N.Y.

S. J. Robinson, M.D., ('76), has gone to Chicago where he purposes practising his profession.

Alexander D. Blackader, M.D., ('71), has passed the final examination for the M.R.C.S.

Dr. T. Craig, ('76), is practicing in Yolo County, California.

Dr. Colquhoun, ('76), is practising in Durham, P.Q.

Dr. Wm. Smith, '(76), is practising at St. Armas, P.Q., six miles from Lachute.

CANADA

Medical and Surgical Journal.

MONTREAL, SEPTEMBER, 1876.

REPORTS OF THE MEDICAL OFFICERS OF HEALTH OF THE CITY OF MONTREAL.

We have received the reports of the medical officers of health of the city of Montreal, for the year ending 31st December, 1875, and it is with something akin to amazement, that we find two separate and distinct reports—differing in some very important particulars—which give the impression that neither are reliable, for who amongst the citizens is in a position of accepting or rejecting either report. The data of these reports have been taken from the public documents. What can we say of those documents when two gentlemen who professedly devote their time and energy to the subject of statistics, can compile two separate and distinct reports, each of which are presumed to be truthful and without fallacy.

We cannot avoid making reference to some of the anomalies of these remarkable documents. In giving the legitimate death rate of the city for the year 1875, exclusive of the still born and foundlings, both gentlemen agree in putting it at 4,328, this takes in all deaths which occur in the Hospitals and other charitable institutions. We have compiled a few remarkable statements in these reports touching the causes of death—we doubt not that they admit of explanation and may both be correct, all we

can say is that they appear to differ. We will place them side by side so that our readers may judge for themselves.

English Report by Dr. Dugdale.		French Report, by Dr. Larocque.	
Small-pox, total deaths	590	Small-pox, total deaths	592
Infantile Debility	509	Infantile Debility	391
Consumption	417	Consumption	437
Diarrhœa	233	Diarrhœa, Dysentery, Cholera Infantum, and Dentition	601
Scarlatina	198	Scarlatina	197
Pneumonia	169	Pneumonia, Bronchitis and other Diseases of the Lungs	361
Convulsions	125	Convulsions	125

Referring to the present number of the population, Dr. Dugdale in his report estimates the increase by adding six per cent. per annum for the four years since the taking of the last census. This appears to be very much in excess, as in another place he estimates the increase of the French population by birth-rate over the deaths at 20·95 per thousand. This would give an increase of ten per cent. in five years, which would make our population outside of all extraneous aid less than 128,000, supposing that all nationalities had increased in the same ratio. But we find that the English-speaking population have not been so prolific, and that their increase by birth-rate has been less than half that of their French-speaking fellow-countrymen. We may here state that the birth-rate was obtained from the returns of the churches to the Prothonotary, which give alone a record of baptisms, and not births.

The energetic Chairman of the Health Committee, Mr. Alderman McCord, on ascertaining from the records that a number of Protestant churches in this city had made no returns, notified these defaulters by circular when a record of eighty-four births was handed in to the Health Department. We willingly believe that there are many more births amongst the Protestant community of whom no record exists, and therefore the calculations thus obtained are worthless. Dr. Dugdale's estimate on the basis of adding six per cent. per annum, for the four years since the taking of the last census, would yield a population of 148,000, which would give a death-rate of 29 per thousand.

Dr. Larocque in his report estimates the increase of the popu-

lation at the same rate, for the past four years, that is to say from the last decennial census, as was noticed to occur during the ten years next before 1871, which according to Dr. L., would yield in the aggregate 132,000. Now herein lies the fallacy. From 1861 to 1871, the city of Montreal increased in population by 27,542. This, at the same ratio of increase would yield a present population of 128,881 souls. The past four years have been unpropitious for the growth of our city, inasmuch as there has been very considerable financial distress, and a large number of operatives have been forced to leave the city in consequence of the closure of many of our factories. We merely allude to these facts to show how utterly absurd it is to deal in inflation. The 148,000 of the English report is torture to the very last degree, the other report is, at least, more modest in its assumption, and far nearer the truth. Dr. Larocque alludes to the sad falling off of Paris, and he informs us on the authority of Dr. Brochard, that for the year 1875, the deaths exceeded the births by some 5,000.

The population of France is at the present day increasing at a lower rate than any other European nation. From 1871 to '75 it has been calculated that France would double its population in 1,380 years. Germany in the same period would double its population in 98 years; Austria, in 62 years; Denmark, in 73 years; Great Britain, in 63 years; Norway, in 51 years; and our Canadian fellow-countrymen in about 48 years. If, indeed, the French Canadian adopted more thoroughly than he does a strict sanitary code, in all his relations of life, we believe he would double his population in a much shorter space of time than above indicated, as they are a hardy, frugal temperate race, and long lived.

We have thus far gone into the fallacies of these reports, we will now turn to what is to ourselves a far more pleasing task, and note what is commendable. In criticising these reports, in all fairness, we must admit that the health officers have had very poor and unreliable records to work upon. We want to call attention to the fact that Mr. Alderman McCord's circular to the Protestant clergy brought forth a record of eighty-four births

which had not been returned. We should like to know who these defaulters are, but in the absence of further information on this head, we may remark that this is a commentary on how our returns are kept, and furnishes a powerful argument in favour of a general registration act. We doubt if there are many Aldermen McCords through the country who with inquisitive ardour will nudge the memories of the defaulting shepherds scattered over this Dominion, and their name is legion.

Both reports give some interesting facts with regard to variola and vaccination. This appears to be more full in the report of Dr. Larocque than in that of Dr. Dugdale, who, on the other hand, compares vaccination as practised in this city with the laws bearing on this subject in various European countries.

Both gentlemen go rather fully into the subject of Foundlings, but while giving us much matter which we have had dinned into our ears in a somewhat different form, there is no new proposal or new method suggested to overcome the difficulty. It is the same thrice told tale of shame, seduction, misery and death—and the same mortality in spite of all that can be done to lessen it. The same experience the world over, and the sooner we learn the lesson that had Dame Nature intended our children to be brought up with a bottle, or to be artificially fed, the human female would have been produced minus her breasts, for nature appears not to make anything which is superfluous or for show only.

We must close these remarks as we have already extended beyond our limit. Both reports are well and carefully got up, but we should advise our friends to unite, and give us this next year one single report, one which may be regarded truthful so far as truth is attainable, one which may be looked upon as not dealing in imagery. The health officers owe it to themselves not to make themselves appear ridiculous. They owe it to the citizens to give reliable and truthful information on sanitary subjects, as for that purpose and with that end in view they were appointed to fill the very onerous and responsible positions of health officers of the city.

We copy by request the following from the Boston *Daily Globe:*

PHARMACEUTICAL CHEMISTRY AT THE CENTENNIAL. — Chemists, students teachers, and all persons interested in the arts, and in the chemical industries and products, as represented in the Exhibition, cannot fail to be proud of the display in this department by the chemists of the United States. Among the 587 exhibitors of the various classes of Chemical Products a Boston house makes an exhibit which, for beauty of arrangement, variety and costliness of the products, can scarcely be equalled, and is creditable not only to Boston but to the whole country.

Upon a triangular space, 16 by 17 feet, in the main exhibition hall, is erected a unique and elegant stand over twenty feet in height, which at once attracts the attention of the visitors to the Exhibition. Approaching nearer to this exhibit we see the name of the house, Billings, Clapp & Co., Boston, upon a groundwork of black velvet, in letters eighteen inches in length, each letter consisting of beautiful crystals of Bromide of potasium. In front may be seen several large glass cases, one octagon in shape, containing large crystals of nitrate ammonia, weighing 150 pounds each. Upon shelves are arranged more than sixty specimens of the products of their laboratory, in glass jars, some of which have the capacity of a barrel, the largest ever made in this country. The only specimens of Propylamin and its compounds in the exibition are found upon this stand, and some idea of the rarity and costliness of this article may be obtained from the statement that the contents of three bottles are valued at more than $2000. They have also a jar of the capacity of twenty-five pounds, filled with carbonic acid, of perfect whiteness, and the largest specimen to be seen in the Exhibition. We noticed particularly a jar of the citrate of bismuth; also, fine specimens of the citrate of iron and bismuth in scales, sulphite of sodium in crystals, the various preparations of gold and silver used in photography, salts of bismuth, iron, lead, mercury, etc., etc.

It is evident to all competent to judge that we have in New England manufacturers who can successfully compete in pharmaceutical chemicals with any house in the United States, and whose products compare favorably with those of any other country.

We see that the soluble Sugar-coated Pills of Messrs. Warner & Co., of Philadelphia, have gained the prize medal at the Chilian World's Fair. This will not be a matter of surprise to any one who has ever had occasion to use them.

CANADA

MEDICAL & SURGICAL JOURNAL

Original Communications.

CASE OF TRAUMATIC TETANUS—TREATED BY NERVE-STRETCHING, CALABAR BEAN, AND CHLORAL.

By Dr. Drake.

Reported by Dr. J. C. Cameron, House Surgeon, Montreal General Hospital.

Peter Johnson, æt 28, a light-complexioned, well-nourished, powerful young Swede, was admitted to Hospital August 25th, 1876, complaining of a soreness about the throat, difficulty of swallowing, and a general feeling of stiffness.

Patient is a coachman and general servant. On the 12th of August he stepped on a rusty nail, running it through the outer margin of the left foot, one inch above the metatarso-phalangeal articulation of the little toe. He pulled out the nail at once, and applied turpentine to the wound. It felt sore for a few days, but as it did not prevent him from working he paid no particular attention to it. On the 20th, he noticed that he could not open his mouth as well as usual, when he was taking his food; he experienced some difficulty in swallowing, not pain, but a sensation as if the food went down "too quickly, with a jerk." He found mastication becoming gradually more difficult, and was consequently obliged to confine himself to liquid food; he was frequently bathed in profuse perspiration. These symptoms became daily more marked till the 23rd, when he began to feel pain in the back and shoulders, or rather a

sense of stiffness which made it difficult for him to bend; slight chills came on at night. On the 24th he left work, but still kept up and walked about, although he felt himself growing stiffer and more chilly. On the 25th he was admitted to Hospital complaining of a soreness in the throat, difficulty of swallowing, and general stiffness. He made no mention of his accident, and, being a foreigner, did not give a very clear account of himself. He walked stiffly, but without pain. In the evening he complained of pain in the chest, back, wrists, and ankles; spent a very restless night, complaining loudly of wandering pains all over the body. On the 26th, at the morning visit, trismus and opisthotonos were well marked; he was covered with profuse perspiration, complained of intense pain in his back and neck, had a desire to defecate, but could not. The symptoms rapidly grew worse during the forenoon, regular tetanic spasms set in, the whole body being convulsed every few minutes; during the spasms the teeth were tightly clenched, the arms and legs drawn up and rigid, the back arched in permanent spasm, so that he lay with only the back of his head and his heels touching the bed. He screamed with pain when the paroxysms came on, and could with great difficulty be controlled; had great thirst, but could not swallow a drop. Pupils were widely dilated. The slightest touch or movement brought on a severe spasm. In this condition he was seen at the midday visit by Dr. Drake, who considered the case to be a very severe one. In the *Practitioner* of November 1874, Dr. Sydney Ringer reports a case of traumatic tetanus treated by large doses of Calabar bean successfully; in eighty-six hours 140 grains of the extract were given with the most satisfactory results. In the *Lancet*, some time ago, Mr. Callender remarked on the operation of nerve-stretching in similar cases in the hands of several French surgeons. In the afternoon of the 26th Dr. Drake met Dr. Fenwick in consultation, and from the success of Dr. Ringer's case, and the favorable reports of the nerve-stretching, determined first of all to stretch the left sciatic nerve, and then to administer Calabar bean in large doses. At 4.30 p.m., the patient having been put under chloroform,

Dr. Drake cut down upon the sciatic nerve at the posterior border of the gluteus maximus muscle, hooked out the nerve, seized it with a strong pair of vulsellum forceps and pulled it forcibly downwards. Before the operation the resp. were 17, pulse 86, temp. 98.4°; pupils widely dilated, muscles in a state of permanent spasm. The immediate effect of the nerve stretching was very remarkable. When the nerve was seized with the forceps, the arms and legs were firmly fixed and rigid, the back arched, the head thrown back, and the teeth clenched, although the patient was under chloroform; when the first pull was given, the muscular rigidity immediately disappeared, the limbs, which had been tense and hard, became suddenly flaccid, the opisthotonos relaxed, the jaws could be opened, and the patient lay quietly and without spasm on the bed. The pulse and respiration were not visibly affected by the operation. After being stretched, the nerve was replaced, the wound closed with fine metallic sutures, and carbolized dressing applied. The wound in the foot was slit open with a bistoury, and a few drops of pus let out; oiled lint was applied, covered with a hot linseed meal poultice;—dressing to be changed every four hours. On coming out of chloroform, the patient felt very comfortable and drank a quantity of milk with avidity; neither spasm nor opisthotonos returning, he sank into a quiet sleep. At 5 p.m. the Calabar bean was commenced; ¼ grain of the alcoholic extract was given hypodermically every 15 minutes for five hours, then ½ grain was given every half hour, so as not to disturb him so frequently. At 6.15 p.m. slight spasms returned in the left leg, and he complained of a feeling as if the leg were being violently stretched or pulled all the time; perspiration stood out upon his forehead in beads. 7.30 resp. 20, pulse 80, temp. 99°; urine was drawn off, causing a severe spasm with return of slight opisthotonos; the urine flowed in jets, and was at times propelled a distance of several feet by the sudden contraction of the bladder.

During the night he had two draughts of chloral, grs. xxx, which soothed him and gave him some sleep. The pupils did not become thoroughly contracted till about midnight when the

slight spasms which had come on at intervals of about ten minutes since six p.m., and had been gradually becoming less frequent and severe, entirely ceased.

Aug. 27th.—During the night the pupils were kept well contracted; the Calabar bean was pushed till 5.30 a.m., when the breathing becoming very shallow, it was stopped till 7 a.m., after which the injections were recommenced. During the night he was very drowsy, and slept heavily, snoring loudly at times. He complained of a little pain in the back and left leg, and occasionally in the epigastrium, but had no spasm or opisthotonos till 10.50 a.m. He drew up his legs and straightened them out again at will, and was, at his own request, turned over on his right side, when he lay quite comfortably for a time. The urine to the amount of 10 oz., was drawn off at 1.30 p.m., exciting a spasm much less severe than when it was first drawn off. The urine was clear and moderately high coloured. During the day he was somewhat restless, and a dose of chloral, grs. xxv, was given at 11 a.m., 4. p.m, and and 9.30. p.m. It was rather more difficult to keep the pupils contracted, and whenever they began to dilate spasms came on which were never very severe. The temperature ranged between 98° and 100°; the pulse, which kept tolerably stong, between 74 and 124, and the respirations 24 and 48, varying according to the degree to which the bean was pushed. He drank about two quarts of milk during the day with difficulty.

SPASMS DURING THE DAY:

A.M.	P.M.	P.M.	P.M.
10.05	1.30	7.55	9.20
10.20	4.15	8.10	9.30
10.30	4.35	8.25	11.30
11.05	7.30	9.00	

Up to midnight 18¾ grains of the Ext. of Physostig. had been given hypodermically.

Aug. 28th.—During the night he slept pretty well; the pupils were kept well contracted, the injections of half a grain being kept up every half hour. He drank two quarts of milk during the night, and in the morning had the dressings applied, his bed made and his shirt changed, without spasm. During the day at

intervals perspiration broke out, chiefly on the forehead and chest, when the pupils were tending to dilate but disappeared when he became more fully under the influence of the Calabar bean. The urine was drawn off three times, the first time without causing spasm. Chloral was given (grs. xxx,) three times during the day. In the afternoon the bowels were freely opened; he was quite conscious of the motion. He became quite restless in the afternoon and evening; the pupils were constantly tending to dilate, and he was with difficulty kept under the influence of the bean; whenever the pupils dilated or even showed a tendency to dilate the spasms at once returned, and became rather more severe. During the twenty-four hours the temperature ranged between 97.8° and 100.2°; the pulse between 98 and 130; and the respirations between 26 and 34. The spasms occurred at:

A.M.	A.M.	P.M.	P.M.	P.M.
12.30	9.30	12.35	4.15	7.35
12.45	9.45	12.45	4.45	8.05
1.30	10.45	1.00	4.50	8.20
3.15	10.58	1.15	4.55	8.55
3.30	11.10	2.00	5.00	9.50
4.30	11.29	2.08	5.15	10.20
4.50	11.45	2.20	5.30	10.30
5.10	11.50	2.30	5.45	10.40
6.10	12.00	3.05	6.00	10.55
7.30	P.M.	3.20	6.15	11.25
7.45	12.05	3.40	7.05	11.30
8.15	12.25	3.55	7.25	11.45

Up to midnight 42½ grains had been given hypodermically.

Aug. 29th.—During the night the pupils manifested a tendency constantly to dilate; the bean was administered hypodermically, ½ a grain every quarter of an hour as the condition of the patient seemed to require. After midnight, the spasms were slight though frequent; they in fact resembled cramps rather than true spasms. Chloral (gr. xxx) was administered twice during the night; the urine was drawn off once causing slight spasm; the bowels were freely opened twice. Although restless at times, he slept tolerably well. All forenoon and afternoon, the pupils kept dilating and contracting, and the

spasms became very frequent, but not severe. At 2 p.m., the pulse was very shabby, and quite uncountable, the face livid, and the respiration labored. In order to stimulate the heart's action, a dessert-spoonful of whisky was ordered to be given every half hour; in a few hours the pulse became stronger, firmer and of good volume. During the evening he was troubled with flatulence, and kept straining constantly. He passed quantities of gas and urine, and had several stools moderately relaxed. In the evening his pupils seemed to become less inclined to dilate and were kept well contracted with less difficulty. Chloral was given four times during the day. During the twenty-four hours the temperature ranged between 98° and 103.8°; the pulse between 98 and 140, but was for about an hour quite uncountable; the respiration between 24 and 32. The spasms occurred at—

A.M.	A.M.	A.M.	A.M.	P.M.	P.M.
12.30	3.15	9.10	10.55	2.20	6.30
12.40	3.30	9.45	P.M.	3.15	6.50
1.00	4.20	9.50	12.10	4.00	7.30
1.15	5.30	9.55	12.30	4.25	8.45
1.30	6.00	10.00	1.15	4.40	9.40
1.50	6.15	10.05	1.25	4.55	9.50
2.00	6.30	10.20	1.40	5.00	
2.10	7.00	10.25	1.45	6.00	
2.20	8.10	10.35	2.00	6.05	
2.40	8.50	10.45	2.05	6.15	

Up to midnight 67½ grains have been given hypodermically.

Aug. 30th.—During the night he drank two quarts of milk, and had a tablespoonful of whisky every hour. He was troubled with flatus, and kept repeatedly passing wind which always seemed to relieve him. The pulse was frequent but firm and of good volume; the profuse perspiration, lividity of countenance and spasms disappeared. He had only one spasm between midnight and 8.30 a.m. The limbs and body remained quite flaccid, and he slept well during the night. In the forenoon he became restless again, the pupils kept dilating, and the spasms returned numerous and severe. All through the day the spasms seemed to be becoming worse; opisthotonos and general rigidity supervened, and he suffered more pain than at

any time since the operation; profuse perspiration of the head and body again appeared, and he had much more difficulty in swallowing: the hypodermic injections seemed to irritate him greatly and to bring on spasms; both arms and body were becoming very sore.

At 8.30 p.m. 87 grains of the extract of Calabar bean had been given to him by hypodermic injection; at 8.30 the injections were stopped, and the bean was ordered to be given by the mouth in doses of from one to two grains of the extract every half hour. The effect of the change was most marked. The pupils, which had been dilating in spite of increased doses hypodermically, contracted in two hours so much that one dose had to be omitted; the spasms became less severe and far less frequent, and he sank into a quiet and refreshing slumber. During the day the whisky was continued regularly and chloral adminstered every four hours. The temp. ranged between 96° and 103.8°, the pulse between 100 and 146, and the resp. between 20 and 43. The spasms occurred at

A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
3.40	10.10	11.15	12.05	3.15	5.25	8.50
8.30	10.25	11.20	12.25	3.45	5.40	9.00
8.45	10.30	11.23	12.30	4.15	6.00	9.45
9.10	10.50	11.25	12.50	4.25	6.12	10.00
9 30	11.05	11.30	1.35	4.35	6.20	10.20
9 40	11.10	11.50	2.05	4.45	7.25	10.40
10.00		11.55	2.15	4.55	7.40	11.10
			2.25	5.15	7.50	11.30

Aug. 31st.—During the early part of the night he was very low; the spasms were severe, trismus and risus sardonicus were well marked, the countenance was livid, and the extremities cold, pulse rapid and feeble, and breathing very shallow; at times profuse perspiration broke out. The breathing was so bad at 3.30 a.m. that the Calabar bean was stopped for an hour and a tablespoonful of whisky was given every half-hour; hot bottles were kept to the feet and legs. At 4 a.m. he sank into a gentle slumber, the perspiration soon disappeared, the pulse became stronger and the breathing better, and he slept without spasm until 7.30. During the day the bean was given every

hour in doses of from 1 to 2 grains along with a dessertspoonful of whisky. The pupils were kept well contracted; he slept a great deal, and when he awoke called loudly for milk. He managed to drink one gallon of milk during the day. Chloral was administered about every four hours.

The temp. has ranged between 99°4 and 103°, the pulse between 88 and 140, and the resp. between 16 and 54. The spasms occurred at

A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
12.40	3.55	12.15	3.45	6.55	9.30
1.05	4.10	12.30	4.00	7.40	10.30
1.25	7.30	2.00	4.07	7.53	10.55
2.00	9.30	2.30	4.48	8.20	11.20
2.35	10.30	3.40	5.30	8.30	11.40
3.15	11.25				

Up to midnight he had taken by the mouth 62 grains of the extract.

Sept. 1*st.*—Passed a good night; slept well; spasms less frequent and less severe; pupils were kept well contracted; drank two quarts of milk during the night. Throughout the day, he had a number of motions, dysenteric in character; the bowels seem to be becoming very irritable; an enema of tinct. opii m xxxv. in a tablespoonful of starch was administered, with marked advantage. The urine was drawn off three times, twice without spasm. A draught of chloral (grs. xxx) was given four times. The pupils showed a tendency to dilate between 4 and 6 p.m., but before and after that they were well contracted. He moves his limbs freely; there is no sign of paralysis of the extremities. The temp. ranged from 98.6° to 102°, the pulse from 100 to 140, the resp. from 22 to 34. The spasms occurred at

A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
12.20	3.50	8.00	1.30	4.45	5.25	6.00
1.00	4.10	9.30	2.25	5.00	5.30	7.35
3.00	7.00	9.45	4.00	5.20	5.45	9.10
		11.10				11.45

Up to midnight 162½ grains had been given by the mouth.

Sept. 2*d.* — Was excited and noisy for about an hour between 3 and 4 a.m.; the whisky was reduced to a tablespoonful every hour, and chloral was given every two hours. After the change was made he slept quietly. During the day

chloral was given twice ; the urine was drawn off four times ; the dysenteric condition of the bowels returning, another enema of starch and opium was given. The pupils were kept well contracted, and the spasms were very slight and far apart. The temp. ranged from 98.4° to 102°, the pulse from 96 to 102, and the resp. from 16 to 44. Spasms occurred at

A. M.	A. M.	A. M.	A. M.	A. M.	A. M.	P. M.
12.05	1.00	1.22	2.50	4.00	5.05	3.45
12.30	1.10	2.15	3.20	4.10	11.30	

Up to midnight 162½ grains have been given by the mouth.

Sept. 3rd.—Passed a very comfortable night ; had a number of little cramps and twitchings which were scarcely noticeable. The dysenteric symptoms have disappeared and the motions have become quite firm. At 9. a.m., he had a rigor lasting ten seconds ; hot bottles were applied and he was relieved. Perspired freely during the night. At 4 a.m. he had a very severe spasm, with general rigidity, lividity of the face, dyspnœa and pain, After a dose of chloral he became much easier and fell asleep. Throughout the day he continued very restless, and although few actual spasms occurred, trismus and general rigidity were quite marked : he swallowed but little and with difficulty ; perspired freely, and passed several slimy motions. At midnight he had another severe spasm, with general rigidity, brought on by draining off his urine.

The temperature has ranged between 98.2° and 100° ; the pulse between 100 and 130 ; the respirations between 18 and 40. The spasms occurred at

A.M. 2.00 9.30 9.50. P.M. 2.00 6.15 11.25 12.00.

Up to midnight 218½ grains have been administered by the mouth.

Sept. 4th. — After midnight, the stiffness relaxed, and although restless at times, he passed a tolerably good night. In the afternoon he seemed weak and much exhausted ; the whisky was accordingly increased. At 3 p.m. the bean was stopped on account of the feebleness of his respiration. At 3.45 his pupils which had been well contracted began to dilate, perspiration broke out and swallowing became difficult ; at 4 p.m. the pupils were widely dilated, and he had a severe spasm. The bean was given again in two grain doses every half hour, and

his pupils began at once to contract, the perspirations and spasms disappeared and he fell asleep. During the day he had several dysenteric motions; an enema of starch and opium was given at 9 p.m. His pupils were well contracted,but his pulse was shabby and he seemed very weak; the bean was discontinued, and only whisky given to 11.30 when a two grain dose had to be given, for his pupils had become again widely dilated, and a severe spasm with general rigidity and profuse perspiration had come on. The temperature during the day ranged between 97.6° and 101°; the pulse between 106 and 130; the respirations between 24 and 40. Spasms occurred at

A.M.—4.00 9.00. P.M.—3.00 3.30 4.00 4.10 4.50 5.25 7.45 11.35.
Up to midnight 271½ grains have been given by the mouth.

Sept 5th.—Throughout the night he remained very weak; the breathing was bad, the pulse feeble, the spasms severe and attended with greater opisthotonos than had been noticed since the operation. One spasm was so severe and sudden, that it jerked him completely out of bed. He swallowed with great difficulty. On the whole, it has been the most anxious time since the operation; the bean could not be given regularly on account of the general prostration and the state of the pulse and respiration. During the day, by dint of giving whisky liberally, chloral every four hours and Calabar bean cautiously, the pupils were kept well contracted, the strength gradually restored, the pulse, respiration and ability to swallow improved. At 1:30 p.m., as the temperature had fallen to 95·2° in the axilla, it was found necessary to take the temperature in the rectum, and it was taken thus throughout the rest of the case. The urine dribbles away; bowels have been somewhat relaxed. The temperature ranged between 95·2° in the axilla and 100·6° in the rectum; the pulse between 100 and 120; the respiration between 18 and 40. Spasms occurred at

A.M.	A.M.	A.M.	A.M.	A.M.	P.M.
12.05	12.50	3.05	4.25	5.55	12.15
12.30	12.58	3.20	5.07	7.15	8.30
12.35	1.35	3.35	5.15	9.05	10.09
12.45	2.50	4.00	5.25	10.45	

Up to midnight, 341½ grains have been given by the mouth.

Sept 6th.—During the night the breathing became shallow and irregular, and the bean had to be discontinued from 2 a.m.

till 4.30 a.m., whisky was given freely all night, and chloral every four heurs, when the pupils became dilated about 4 a.m. Spasms came on but they ceased after one dose of the bean had been given. In the afternoon the pulse became irregular, feeble and intermitting; one ounce of whisky was given every half hour for four hours, and the pulse became stronger and more regular. All day the bean had to be given cautiously, the dose being increased, diminished or omitted according as the state of the pupils, pulse and respiration demanded. He had several motions, inclined to be dysenteric; an enema of starch and opium was given, with relief. Temperature has ranged between 98° and 100.2° in the rectum; the pulse between 60 and 140; the respirations between 28 and 44. Spasms occurred at

A.M.	A.M.	A.M.	P.M.
4.00	4.45	7.50	7.00
4.15	4.52	3.30 P.M.	9.00
4.30	7.40	5.00	11.38

Up to midnight 398½ grains have been given by the mouth.

Sept. 7th.—During the night, the bean could be given in doses of one grain only; consequently, the pupils manifested a tendency to dilate; trismus was well marked, and he had great difficulty in swallowing. He drank only one-and-a-half pints of milk during the night. During the day he became somewhat stronger, the pupils were well contracted, he had no spasms or rigidity, and he drank four pints of milk quite eagerly, and without difficulty. He is becoming somewhat troublesome and restless; tosses around a great deal, and wants to get up out of bed. He speaks rationally, and seems cheerful. At 6 p.m. he was moved to another bed; slight rigidity occurred, but no distinct spasm. The bowels seemed irritable, and were opened several times during the day; the urine passes away in bed. The temperature has ranged from 99° to 101° in the rectum; the pulse from 100 to 140; the respirations from 28 to 40. Only one spasm occurred during the 24 hours—at 4:28 a.m.

Up to midnight, 445¼ grains have been given by the mouth.

Sept. 8th—Was somewhat restless during the night; slight opisthotonos and general rigidity was noticeable at times; the

pupils were kept tolerably contracted; the bowels were very irritable; chloral was given every four hours, and the bean in one grain doses every half hour; he slept heavily during the night. During the forenoon the general rigidity disappeared, and he seemed quite comfortable. At 11:40 a.m. he had a severe spasm, with profuse perspiration. In the afternoon, a good deal of twitching of the eyelids was noticeable. At 9 p.m. he was feeling very comfortable; pupils were well contracted, no rigidity or spasm had come on since 11:40 a.m.; he was quite talkative, planning what he would do when he got well. At 9 p.m. I was called away to attend to some other duties, and I did not see him again till 11 p.m.; I found him then quite rigid, breathing very shallow, 28 per minute; pulse firm and good, beating 100; temperature, 100°. Pupils were widely dilated, and he was covered with a cold perspiration. I was informed that shortly after I left him at 9 o'clock, rigidity began to come on, and he found it difficult to swallow; at 9:30 one grain of the bean was given with great difficulty, but after that time the nurse found it impossible to give him either the bean or whisky; the pupils began to dilate, spasms set in, and the general rigidity increased. Finding it impossible to get him to swallow anything, I determined to give him a hypodermic; before I could do so, however, a spasm seized him, he became quite rigid, the chest became fixed, and breathing ceased; the pulse was then beating at the rate of 90 per minute, and was firm and of good volume; it beat on quietly for a few seconds, and then stopped. At 11:10 p.m. he was dead. Artificial respiration was kept up for some time, but without avail. The temperature ranged between 97.4° and 101.2°; the pulse between 76 and 140; the respiration between 18 and 40. Spasms occurred at

A.M.	A.M.	A.M.	A.M.	P.M.	P.M.
2.00	4.00	5.30	11.40	10.30	11.00
3.30	5.00	9.30	10.00 P.M.	10.49	11.10

If I could have been with him after 9 p.m. the fatal termination might have been warded off, for he had come safely through very much worse spasms when he was far more prostrated. He was so much stronger and better than he had been

for days, that we were all confident that he would recover. The inattention and culpable neglect of one of the attendants is no doubt in a great measure answerable for the poor fellow's death. It was ascertained, when it was too late, that his whisky, upon which we relied to maintain the heart's action and counteract the depressing effects of the bean, had not been given to him regularly nor in the quantity prescribed. A portion of it was drunk up by one of the attendants. This most unfortunate affair is much to be regretted, as the case was progressing so favorably and bade fair to be a triumph for nerve-stretching and Calabar bean.

Throughout the case, spasms invariably came on when the pupils began to dilate, and as invariably disappeared when the pupils contracted. Perspiration was always more profuse when the pupils were dilated and spasms existed, and it generally ceased with the spasms. The pulse and respiration were markedly depressed by the bean; the pulse at times became shabby, irregular, intermitting, and once or twice quite uncountable; the respiration became slower, more labored and shallow, and at times irregular, one deep breath being followed by one or two short quick ones. The chloral was very useful; it seemed to quiet the great restlessness and bring on refreshing sleep. It was given throughout the case whenever the patient became very excited or restless, and ℥ij to ℥iij were given daily.

Whisky was invaluable. As a cardiac stimulant it worked marvels. The pulse was often reduced in frequency, improved in quality and volume by increasing the whisky and diminishing the bean. By carefully and judiciously regulating the doses of the bean and the whisky, the pupils were on the whole kept pretty well contracted, without dangerously interfering with pulse or respiration. Throughout the case, the bean caused no irritability of the stomach; there was never any vomiting, or even a feeling of nausea; there was considerable irritation of the intestinal tract, for the bowels became much relaxed, and the stools contained blood and mucus. There was no paralysis of the extremities noticeable; on the contrary, he rolled around, tossed his arms and legs about quite freely, and

the last day could with difficulty be prevented from getting out of bed. The total quantity of the bean given in the case was:

By hypodermic injection..... 87 grains.
By the mouth..... 489½ "

Total..... 576½ grains.

The preparation used was the alcoholic extract manufactured by "McKeason & Robbins" of New York. It was obtained chiefly from Mr. Henry R. Gray, druggist, and was a thoroughly reliable article.

Autopsy.—48 hours after death, cadaveric rigidity still well marked. Lungs very much congested; gorged with blood. Heart: left ventricle contracted; right side filled with dark fluid blood; organ otherwise healthy. Liver and kidneys healthy. The sciatic nerve was removed from the popliteal space to where it entered the pelvis. Where it had been seized by the forceps to stretch, the marks of the teeth of the forceps were evident from ecchymoses. The texture of the nerve did not appear to be injured here or above this spot. Felt as hard as below. No stiffening nor tearing evident. Below this spot no change whatever in the nerve was evident; above, the sheath was very much injected. The branches of the sacral plexus in same condition. The spinal cord was removed from the fifth vertebra to the sacrum. Between the seventh dorsal and the first lumbar vertebra there were found spots of extravasation of blood in the canal, outside of the membranes on the posterior side of the canal. The membranes of the cord were much injected.

CASES OF GONORRHŒA—TREATED BY OLEUM ERIGERONTIS CANADENSIS.

By G. A. Stark, M.D., C.M., Milwaukee, Wis.

The following is a very brief account of a few cases treated by Ol. Erigerontis Canadensis. They are not given in order of time, but as they come to hand and are numbered for convenience.

Case 1. Applied for advice Sept. 26th, 1872. Diagnosed

Gonorrhœa. Discharge had been present two weeks. I will not record other symptoms, as they were those of which patients similarly afflicted usually complain.

Treatment.—Ordered a bottle of the fluid citrate of magnesia to be taken at bed-time and the following:

℞. Ol. Erigeron. Canadensis, ℥ij; Syr. Simplicis ℥ij; M. Shake the bottle well before using. Sig: Teaspoonful every four hours. Diet was also regulated.

Saw the patient three days afterward. The discharge was not present. Said he had seen no discharge since last night. Continued the treatment for a week. No return of discharge. Other symptoms subdued. Discharged.

The above combination (scarcely a mixture, as when agitated it only seems to be mixed), when flavored with essence of wintergreen and taken in water, is very agreeable to the taste.

Case 2.—Applied for treatment April 24th, 1873. Discharge had been present for a week, copious.

Treatment as in case 1. On the 26th the patient reported that the discharge had ceased. Said the night of the 24th and 25th it literally ran away. Continued the treatment a week longer. No return of discharge. Patient discharged.

Case 3.—Applied for treatment July 7th, 1873. Discharge had been present for three weeks.

Treatment same as above. Discharge ceased in a week.—Continued treatment for four days longer. Discharged.

Case 4.—Applied for advice July 13th, 1873. Same treatment as above. Patient discharged in four weeks.

Case 5.—Applied for advice July 14th, 1873. Discharge present for about six weeks.

Treatment same as in case one. Discharge ceased in a week. Discharged in ten days from beginning treatment.

Have also given the oil in combination with sweet spirits of nitre and simple syrup; with fluid extract of buchu, sweet spirits of nitre, and simple syrup; with oil of sandal wood, alcohol and simple syrup, &c. The formula for the last named combination is as follows:

℞. Ol. Erigeron, Canadensis ℥iij; Ol. Lig. Santal, ℥jss; Spt.

Vini. Rect. ʒj; Syr. Simplicis ad. ʒiij. M. Flavor with the essence of wintergreen. Shake the bottle before using.

Sig: Teaspoonful in a little water every 2, 3 or 4 hours as deemed necessary.

MEETING OF THE INTERNATIONAL MEDICAL CONGRESS.

Monday's Proceedings.

At twelve o'clock on Monday, September 4th, the International Medical Congress was called to order by Professor S. D. Gross, President of the Centennial Medical Commission, in the hall of the University of Pennsylvania. There were, at a rough estimation, four hundred and fifty gentlemen in the audience. The Right Rev. Bishop Stevens, of Pennsylvania, opened the exercises with prayer, after which Professor Gross delivered an eloquent address of welcome, which we regret we cannot give at length. We merely give an extract, in which he dwells with natural pride on the progress of the country as exemplified by such an occasion.

"In its wide range, the present congress is without a parallel. Similar bodies have repeatedly met, but none on so grand a scale or with such a cosmopolitan outlook.

"In organizing the congress the commission may have been guilty of undue partiality towards their own country. Perhaps such a tendency was, after all, to show the world what the century since the establishment of our independence as a free and sovereign people has accomplished for scientific medicine. For this purpose, topics illustrative of the progress and present condition of the different branches of medicine in the United States have been assigned to gentlemen of acknowledged rank in the profession in different sections of the Union. These exercises will, it is believed, add greatly to the interest of the occasion. Time was when we had no medical literature, no medical science; when we were utterly helpless, and wholly dependent upon the aid derived from our European brethren, especially the English,

whose language, practice, and habits we made our own. The poverty of the country in these respects cannot be better illustrated than by the fact that we had no native works on medicine and the collateral sciences until after the commencement of the present century. Many of you will recall the words of the great English lexicographer, who, in 1769, in speaking of the American colonies, exclaimed, 'Sir, they are a race of convicts, and ought to be thankful for anything we allow them short of hanging.' The Abbé Raynal, writing in the latter part of the last century, declared that America had not yet produced a single man of genius; and the exclamation of a celebrated Scotch reviewer, uttered at a more recent period, 'Who reads an American book, who goes to an American play, or who looks at an American picture?' is still fresh in the memory of many of the present race of men. The discourses which will be delivered before you on the progress of American medicine will serve to show that the profession in the United States has earned for itself an enviable reputation, and that it is fully abreast with all the other pursuits that adorn the human mind and shed lustre upon the scientific character of the nation. They will serve to show that we have passed the period of medical provincialism, and that we stand upon a lofty platform, to which we need not be ashamed to invite the representative men of the profession of foreign countries, however illustrious, or however far advanced in the arts of civilization."

Following the address of Dr. Gross, the names of a committee of thirteen, who had been nominated by a committee appointed by the commission, were submitted to the congress for acceptance. The duties of this committee were the nomination of the officers of the congress. Nine of them were Americans, four were Europeans. Their appointment was confirmed by unanimous vote of the congress. Dr. Austin Flint, of New York, was then introduced as the reader of the address on medicine. This interesting address, of which we give an abstract elsewhere, was listened to with great attention, and, at the close, Dr. Gross made reference to the modesty which led Dr. Flint to omit all mention of his own celebrated writings. The address was then referred to the committee on publication.

The thanks of the congress were tendered Dr. Gross for his address, and a copy of it was asked for publication.

The committee on nominations next reported their choice of the following gentlemen as officers of the congress:—

President: Dr. S. D. Gross, Philadelphia.

Vice-Presidents: Dr. Paul F. Eve, Tennessee; Mr. Joliffe Tuffnell, Dublin; Dr. W. L. Atlee, Philadelphia; Dr. C. Lange, Copenhagen; Dr. J. Johnson, St. Louis; Dr. F. Semeleder, Vienna; Dr. Hunter McGuire, Virginia, Dr. Johan Hjort, Christiania; Dr. S. G. Richardson, New Orleans; Dr. William H. Hingston, Montreal; Dr. J. White, New York; Dr. H. Miyake, Japan; Professor N. R. Smith, Baltimore; Professor Rudnew, St. Petersburg; Dr. J. M. Toner, Washington, D. C.; Professor Heuter, Griefswald; Dr. G. L. Collins, Rhode Island; Dr. R. F. Hudson, Australia; Dr. H. Gibbons, California; Dr. P. De Basieux, Belgium; Dr. N. S. Davis, Chicago; William Adams, Esq., London, Eng.; Dr. L. A. Dugas, Georgia; Professor Simpson, Edinburgh; Dr. J. K. Bartlett, Wis.

Honorary Vice-Presidents: Surgeon-General Barnes, U.S.A., Surgeon-General Beale, U. S. N.

Treasurer: Dr. Casper Wister, Philadelphia.

Secretary-General: Dr. I. Minis Hays, Pennsylvania.

Assistant Secretaries: Dr. William B. Atkinson, Dr. R. J. Dunglison, Dr. R. A. Cleemann, Dr. W. W. Keen, Dr. Bertolet.

Section of Medicine: Chairman, Professor A. Stillé; Secretary, Dr. J. Ewing Mears.

Biology: Chairman, Prof. J. C. Dalton; Secretary, Dr. J. Tyson.

Surgery: Chairman, Prof. Joseph Lister; Secretary Dr. J. H. Packard.

Dermatology and Syphilology: Chairman, Dr. J. C. White; Secretary, Dr. A. Van Harlingen.

Obstetrics: Chairman, Professor Barnes, London, Eng,; Secretary, Dr. William Goodell.

Ophthalmology: Chairman, R. Brudenell Carter, F.R.C.S.. London; Secretary, Dr. J. Green.

Otology: Chairman, Dr. C. J. Blake; Secretary, Dr. H. N. Spencer.

Sanitary Science: Chairman, Dr. Stephen Smith; Secretary, Dr. E. M. Hunt.

Mental Diseases: Chairman, Dr. J. P. Gray; Secretary, Dr. W. Kempster.

Dr. Gross, on taking his seat, thanked the congress for the honor conferred on him, and said that nothing would be dearer to him during the remainder of his life than to have presided over their deliberations. He considered it was an honor not solely bestowed on him, but as a tribute to the profession of Philadelphia, who had been so instrumental in organizing this congress. To preside over such a body is an honor of no ordinary kind.

The meeting then adjourned to meet at ten o'clock on Tuesday.

Tuesday's Proceedings.

The International Medical Congress reassembled at ten o'clock on Tuesday morning in the chapel of the University of Pennsylvania, West Philadelphia, Dr. S. D. Gross, President, in the chair.

Dr. I. Minis Hays announced that up to three o'clock, Monday, the names of about three hundred delegates were registered.

Next in order came the reports from sections, which were read.

Dr. T. G. Richardson, of New Orleans, moved that the congress be not held responsible for the reports of the sections, and Dr. Nathan S. Davis, of Chicago, moved that the reports be merely accepted and referred for publication. Both motions were agreed to.

Congratulatory letters from foreign societies were then read, after which were then read invitations to delegates to visit the university buildings, the new hospital of Jefferson College, the College of Physicians, and the Academy of Natural Sciences. It was then announced that Room 4, in Judges' Hall, Centennial grounds, had been reserved for the use of the delegates.

The committee on nominations presented the following additional report, which was adopted:

Committee on Publication (with power to choose its chairman and an editor): Dr. J. H. Ashhurst, Jr., Dr. R. J. Dunglison, Dr. William Goodell, Dr. J. H. Hutchison, Dr. Caspar Wister.

Treasurer: Dr. Caspar Wister.

Vice-Presidents of the sections: Medicine: Dr. R. P. Howard, Canada; Dr. J. J. Woodward, U. S. A.

Biology: Dr. A. Flint, Jr., New York; Dr. F. W. Campbell, Canada.

Surgery: Dr. J. A. Grant, Canada; Dr. J. Ashhurst, Jr., Philadelphia.

Dermatology and Syphilology: Dr. S. Engelsted, Copenhagen; Dr. E. Shippen, U. S. N.

Obstetrics: Dr. A. Simpson, Edinburgh; Dr. W. H. Byford, Illinois.

Ophthalmology: Dr. William Thomson, Philadelphia; Dr. H. W. Williams, Boston.

Otology: Dr. A. Buck, New York; Dr. C. J. Blake, Boston

Sanitary Science: Dr. J. S. Billings, U. S. A.; Dr. H. B Baker, Michigan.

Mental Diseases: Dr. I. Ray, Philadelphia; Dr. E. Grissom. New Orleans.

Dr. Bowditch delivered an address on hygiene.

The sections met at three P.M. In the section on Surgery Prof. John F. Hodgson, of St. Louis, read a paper on Antiseptic Surgery. He defined septicæmia, and referred to the views of Rindfleisch, Tyndall and Pasteur. Tyndall concludes that bacteria are irregularly diffused through the air; hence the difference in hospital experience in various sections. In some there is more septicæmia, in others less. In septicæmia the blood contains elements of putrefaction, and the purulent or putrescent elements are derived from fluids. Absorption, as asserted by Billroth, takes place most readily in the early stages of inflammation and in recent wounds. Diseased skin and wounded surfaces take up these matters readily, yet the latter do not pass through healthy granulations. This has been proved by experi-

ment. Putrid pus is found in abscesses in many parts of the body. A destructive inflammation may originate in these collections, the surrounding walls of the cavities may melt away, and septicæmia, following a large flow of putrid pus, is probably due to fresh inflammation in the walls of the abscess or cavity. Debility, fatigue, and the like, induce these changes.

Animals fed on sulphites are not so liable to septicæmia as animals otherwise fed. Any substitute that arrests putrefaction is antiseptic. Cotton as dressing is not reliable, because we cannot be sure that it is free from bacteria. Heating the wool or diffusing gases through it (Lister's method) may free it from germs. Charcoal, clay, chalk, Peruvian bark, and pulverized madder-root are all useful, but not absolutely sure. Caustics destroy the living organisms upon which putrefaction depends. Currents of dry air, by desiccating the fluid from wounds, prevent absorption of putrefying matter. Practice is infinite in variety. One practices isolation; another, ventilation; another watches over the wound; another seals the absorbing surface. One leaves wounds open; another washes and scrubs; another plasters and daubs. All this shows, at any rate, the necessity of great care in protecting wounds. We see, too the hopelessness of preventing the entrance of bacteria by plasters, powders, or fluids. If we can keep septic matters within bounds we prevent septicæmia. We see this in washing out wounds or inflamed uteri.

The antiseptic ligature cannot be ignored. It becomes absorbed and organized. Lister says that we really surround vessels with living animal tissue. Epithelial cells, as is well known, after their removal from their place of origin, can proliferate. Why, then, cannot animal ligatures receive and become organized when around vessels?

Dr. Paul F. Eve uses the tendons of the deer. They become absorbed.

The entrance of septic germs may be prevented, but only for a time. Actual prevention requires such exact care as will be seldom seen. Practically the conditions to be met are so difficult as to make us nearly powerless. Germs having been found

under dressings so ingenious as those of Lister, it shows how nearly impossible it is to prevent their contact with wounds.

Professional experience teaches us that, as Billroth asserts, absorption by granulating surfaces does not take place rapidly enough to cause septicæmia. It takes place *before* granulation begins.

Drainage tubes, water baths, and other rapid means of cleansing wounds will prevent absorption.

The paper being concluded, Dr. Hewson, of Philadelphia, related his experience with various dressings, finally adverting to the earth treatment, with which he has been very successful. He thinks water dressings and douchings convey germs, and agrees with an English author who says that all fluids as dressing are bad for this reason. For ten years he has not used ligatures, but acupressure and torsion, and thus one source of putrescence is avoided. Dr. Hewson now removes dressings as infrequently as possible, covering wounds with blue paper, which, he thinks, excludes rays of light. During the past few months he has used salicylic acid, but has not allowed wounds to be washed nor dressing to be disturbed when not soaked by the discharges. At present he finds nothing so satisfactory as salicylic acid. He finds, too, that it relieves pain.

The great event of the day was the discourse by Professor Lister in the discussion that followed this paper. He spoke for three hours, during which he received the most unwavering attention. He first referred to the great trouble which attends a perfect use of the antiseptic method. He acknowledged the wearying care attendant upon its use, but expressed his honest belief that there did not exist a medical man who would not be faithful in carrying out any form of treatment which promised to help a patient. He described an operation by which he recently cut out large wedge-shaped pieces from the two femurs of a cripple, in order to straighten his limbs. To do this without strict antiseptic treatment would make success impossible.

Referring to wounds on the head, he said that to remove dressings after days in which they were left untouched, and to find no pus, but fresh cicatrices, was a new era in surgery. This

cannot be done without antiseptic treatment. To open the spine, remove carious bone, and restore the patient to health cannot be done without strict antiseptic treatment. To open an acute abscess, press out the last drop of pus, and see no more form can only be accomplished by the antiseptic method. Unless we use this method we cannot safely tie large arteries without deep-seated suppuration. "Indeed," said he, "I should be exceedingly sorry to apply any ligature without strict antiseptic treatment. We need have no hesitation in expressing the belief that although we may have good healing without antiseptic treatment, we cannot thus secure the best results. Antiseptic surgery is dealing with surgical cases in such manner as to prevent putrefaction. When I read Pasteur's original paper I said to myself, 'Just as we may destroy lice in the head of a child who has pediculi, by poisonous applications which will not injure the scalp, so, I believe, we can use poisons on wounds to destroy bacteria without injuring the soft tissues of the patient.' Putrefaction may be caused by an individual himself, because of his feeble condition. In simple fractures, even, we have a serious wound. If we could only see it we should say. 'Here is dead tissue. It must be poulticed to help its removal. I say in simple fractures are injuries of all degrees.

"If injury follows the opening of an abscess, it is not due to the admission of matter from without, but to the effect upon the pyogenic membrane, which gives it power to absorb, as it did not while intact. So says Billroth. But we did not need to have Billroth tell us that granulations do not absorb, and that putrescent absorption occurs before granulation. I said this in works of mine years ago. We all know how when water dressings are removed from granulating surfaces, the whole ward will stink, and yet the granulations do not absorb. We knew this long before Billroth wrote. The cause of the mischief in the opening of abscesses without the antiseptic treatment is that the pyogenic membrane is not in a condition of granulation. But in acute abscesses we have a granulating surface, just as we have in recent wounds. It is not so in chronic abscesses. Many abscesses do not form pus at all until they are opened. They

are not then in a condition of granulation, but in consequence of their chronicity they can absorb. Granulations covered by epithelium develop in proportion to the amount of epithelium. In pyogenic membranes the surface will absorb in proportion as it resembles a sore with the granulations stripped off. I have seen a patient die within twenty-four hours, and before the membrane had time to granulate, by absorption of putrescent matter, and although the fluid discharge was clear and not yet pus, it stunk."

Professor Lister then showed his common and most reliable dressing. He uses carbolic acid, but insists that it be perfectly pure. That which makes carbolic acid unpleasant to the smell is cresyllic acid. "If a solution of acid and water be not clear, the cloud is caused by insoluble carbolic acid, and this portion will irritate the hands if rubbed upon them. But a perfectly pure solution will not do this. Carbolic acid has the property of penetrating through many, even oily, substances and will cleanse more perfectly than anything else we know." Lister likes salicylic acid, but prefers carbolic because more volatile and hence more searching. He then showed his ingenious spray producer, which is so arranged that the spray can be directed at any angle upon a wound without the aid of an assistant. He begins his dressing by first requesting his patient to cleanse the injured part by washing. He used to excise the carpus. Now he does not like the operation. In case of injury in which there is great mobility of the wrist, he makes two or more free incisions into the joint, keeps the wound open, and uses a drainage tube, with good results. The finger-nails should always be cleaned before the hand or finger is introduced into the body. Nothing of this sort should be neglected. Be sure not to introduce anything into the wound not cleansed by the carbolic acid lotion of one part of acid to twenty of water.

Lister uses a coarse netting dressed with a mixture of carbolic acid one part to resin five parts. He first lays upon the wound a piece of oil silk well varnished with copal varnish and wet in the carbolic-acid lotion. He does not use this in opening abscesses, because he does not wish them to heal. If the gauze

went first upon the wound it would irritate and cause a flow of pus, but if the oil silk be first laid on we may leave the dressing for a week. The trouble is great, but it pays. If during an operation an instrument be laid on the table it should not be again used until it has been dipped into the carbolic-acid lotion. Those who use the method do this instinctively. The gauze is next laid on, first being dipped into the carbolic-acid lotion. The remainder of the dressing, already prepared of layers of calico, oil silk and wadding, must not be laid on without first protecting it by gauze dipped into the lotion, because having been lying upon the table it may be covered with germs. All this is done under a cloud of spray, and when the dressing is changed it must be done under the spray, and one must see that this plays between the dressing and the skin of the patient. The whole is bound on by a roller of silk gauze moistened in the solution.

Lister then at great length, explained his own experiments and those of others with milk, water, urine, and other fluids, variously protected from bacteria by covers, or by boiling, and he showed how germs may find entrance into the fluids, and how these fluids may be protected from them. In regard to bacteria found in freshly voided urine, he said that he believed that a healthy mucous membrane in the urethra prevents the development of bacteria. In lesions of the membrane, if it be washed by a solution of water and carbolic acid, and the penis be washed in the solution and a cap soaked in the solution be put on, the urine will not change in any respect. He then described his catgut ligature and his method of preparing it. He at first tried chromic acid, but that substance made the ligature too hard. He then tried glycerine, chromic acid and water; next, chromic acid and carbolic acid; now he uses chromic acid, glycerine, water, and spirits of wine.

Professor Gross then said that for years he has prevented irritative fever in patients who had chronic abscesses, without the antiseptic method, by putting them at once under the influence of anodynes and keeping them thus for several days.

In reply to a question as to the use of the antiseptic treatment on abdominal lesions, Lister mentioned a case in which the

bowel protruded and lay outside the cavity for half an hour, covered with a cloth dipped in the carbolic-acid solution. The bowel was returned and there was not the slightest disturbance of the peritoneum. All operations are done under spray. He himself never did ovariotomy because there was an ovariotomist in his hospital, but all of his six colleagues, with one exception, employed the antiseptic treatment as carefully as he himself, and their success is in proportion to the amount of care they use. Lister said many other things of interest, but lack of space will not admit them here. He spoke three hours and kept the attention of his audience to the end. He explained away the report that bacteria had been seen under his dressings, by saying that the report was started by Ranke, Volkmann' assistant in Halle, who thought he had discovered bacteria, but, when Ranke came to Edinburgh, Lister showed him that these supposed bacteria were only a microscopical illusion. a false impression caused by a movement of the fluid in the field of the microscope, which movement was communicated to particles of inanimate matter which resembled bacteria. Ranke confessed his error.

In the Section on Medicine, Dr. J. J. Woodward read his paper on typho-malarial fever, and answered the question, " Is it a special type of fever ?" in the negative. Curves which he has constructed show that this form of fever occurs most intensely in autumn. Some sections, as New England, New York, West Virginia, and others are free from this fever, but it prevails in the Southern States and on the Atlantic coast, increasing as we go south. Throughout all the great regions occupied by our armies in the late war, these fevers prevailed with excessive force ; disordered livers and big spleens were abundant.

Typhoid fever is more frequent in the North than at the South, but exists everywhere. It decreases as we go south, but areas occur in which it is prevalent. Liebermeister compared the statistics of typhoid fever, and found it generally autumnal, except in Milan. Dr. Woodward thinks that Liebermeister's curves represent the annual course of typhoid in America, and has addressed the question to secretaries of boards of health all over the country, but has not yet had time to analyze their

replies. He thinks that typhoid rages most from September to November. In numerous districts of America intermittent and remittent fevers once prevailed. The intermittent fevers decreased, and remittent took more and more frequently the form of typhoid fever. When the periodical fevers form epidemics, the typhoid retires until they disappear.

"Is typho-malarial fever a special type of fever?" Dr. Woodward's opinion is that it is not, but only a hybrid of old and well-known conditions. The essential point is the recognition of hybrid or complicated forms of typhoid and malarial fevers. The scorbutic element was only the accident of our war. Dr. Woodward still believes that simple typhoid fever and simple remittent did occur, but to what extent has not been tabulated.

He closed his paper by quoting leading men who accept his theories.

In the Section of Medicine the afternoon was mainly occupied in discussing the question as to the duality or unity of croup and diphtheria. The majority were decided disciples of the dual theory.

The paper on Medical Teaching, by Professor Reid, of Halifax, advocated the greatest simplicity in teaching, in the use and number of terms. The paper, though clear in matter and good in quality, was so elementary in character that it was voted that it should not be reported to the general meeting.

In the Section on Obstetrics the papers for the day were read and warmly received. An extra paper on Dressing of the Pedicle in Ovariotomy was also read, and gave rise to the usual-long discussion.

In the Section on Dermatology the question, "Are eczema and psoriasis local or constitutional manifestations?" was discussed in the paper read by Dr. Bulkley. The unanimous decision was in favor of the constitutional character of these affections.

Your reporter failed to hear the probably interesting paper on the Excretory Functions of the Liver, read by Dr. Austin Flint, Jr., before the Section on Biology.

This section listened to Professor Johnston's paper on Micros-

copy of the Blood. It was stated during the reading of the paper that there are two varieties which have circular red blood corpuscles.

The discussion which followed settled into consideration of the old question concerning the ability of microscopical experts to distinguish the blood corpuscles of man from those of animals. The ground taken by Dr. Richardson is that if the question be narrowed down to whether this blood be that of man or of sheep, the microscope will reveal the difference without failure. Nothing new was developed by the discussion.

The Obstetric Section listened to Dr. Byford's paper on Uterine Hæmorrhage. The remaining sections were but poorly attended.

Monday evening, the physicians of Philadelphia gave the delegates a reception at Judges' Hall in the Centennial grounds.

The two receptions given by Drs. Thompson and Wilson were fully attended and very elegant in character.

Wednesday's Proceedings.

The International Medical Congress reassembled this morning at ten o'clock, in the chapel of the University of Pennsylvania, West Philadelphia, Dr. S. D. Gross in the chair.

Dr. John L. Atlee moved that the secretary or the publishing committee be requested to send to the governor of each State and Territory, and to each Province in Canada, a copy of the address of Dr. Bowditch. Adopted

Dr. I. Minis Hays reported that the names of over four hundred delegates had been registered.

The National Temperance Society here presented a request, which was quietly and unanimously tabled.

Dr. Seguin, of New York, addressed the congress, after which the following was adopted :—

" The International Medical Congress of 1876 recognizes the advantages which would accrue from the introduction of a gradual uniformity in the multiple and heterogenous elements of physic, as posology, nomenclatures, etc., and in the means and records of medical observation.

"In consequence, the congress appoints three delegates to the International Congress of 1877, to meet at Geneva, Switzerland, with the special duty of presenting a schedule of the means of uniformity in physic actually applicable in all countries, and another of those which could soon be made acceptable by the profession at large. Said delegates to be advised to invite the co-operation of the men who have already worked for the same cause at the International or National Medical or Pharmaceutical Congress of Paris, Vienna, St. Petersburg, Brussels, and Buffalo."

Reports from the different sections were then presented.

The Section on Mental Diseases reported on the question of Responsibility of the Insane for Criminal Acts as follows:— *Resolved*, "That there is at present manifested a tendency to hold the insane responsible for the commission of acts. That this tendency is unjust, unphilosophical, and contrary to the teaching of pathology, which clearly points out that insanity is the expression of disease."

The Section on Sanitary Science reported on the paper on Hospital Construction and Ventilation read by Professor Stephen Smith, of New York, as follows: "*Resolved*, That the report of Dr. Smith be recommended to the congress for publication. While the section does not pass judgment as to the conclusions of the report, the paper contains much of an interesting and historical character."

The Section on Otology, on the question, "What is the best mode of uniform measurement of hearing?" reported by Dr, Charles H. Burnett, concludes "that preference should be given to the voice over the watch and tuning-fork, and recommends a series of test words."

The question as to whether eczema and psoriasis are local or constitutional was decided by the Section on Dermatology in favor of constitutional character of these lesions.

The remaining sections did not report.

The address on Surgery was then read by Prof. Paul F. Eve, of the University of Nashville.

It is not easy to make an abstract of a paper which was almost encyclopædic in character.

Dr. J. M. Toner's paper was then read, his subject being Medical Biography.

In the Section on Surgery, Professor Van Buren's paper should have been read in the order of the programme, but Professor Lewis B. Sayre first read his paper on Coxalgia. Since Dr. Sayre had arranged to make a practical display of his method of treating this disease at the Philadelphia Hospital, he omitted much of the general detail of the subject. He drew the following conclusions:

(1.) That morbus coxarius is a disease peculiar to early childhood, or the age of reckless indifference.

(2.) That it is almost always of traumatic origin, and not necessarily connected with vitiated constitution.

(3.) That *rest* and freedom from pressure of *the parts* involved, while at the same time the rest of the body is allowed free exercise in the open air, and a nutritious diet is the best treatment that has yet been devised for this disease.

(4.) That if this plan of treatment is adopted in the early stages of this disease, the majority of the cases will recover with nearly, if not quite perfect motion, and without deformity.

(5.) That in the advanced *second* stage of the disease, when absorption cannot be produced, it is better to puncture or aspirate the joint and remove its contents than to leave it to rupture by ulceration.

(6.) That in the third stage of the disease, when the treatment recommended in this paper has been properly applied with satisfactory improvement, but progressive caries continues, then *exsection* of the diseased bones is not only justifiable but absolutely necessary.

(7.) That the operation of exsection of the hip is easily performed and attended with no danger.

(8.) That after exsection of the hip-joint in cases of caries the recovery is much more rapid and certain, and infinitely more perfect as to form, motion, and the usefulness of the joint and limb, than when left to the slow process of nature's exfoliation.

Dr. C. H. Mastin, the reporter on the Causes and Geographical distribution of Calculous Disease, was unable to be present.

His paper was read by Dr. H. Lennox Hodge. Dr. Mastin states that—

The *probable* causes at work in the formation of calculous affections are :—

(1.) Hereditary influences, which control a diathesis.

(2.) Digestive troubles, induced by an excess or deficiency of proper diet.

(3.) Sedentary life, with indulgence in stimulating food, by which healthy nutrition and assimilation are altered to mal-assimilation and mal-excretion.

(4.) Climatic changes, deficiency of clothing for the proper protection of the body, and an arrest of the healthy function of the dermoid tissue.

(5.) Want of harmony between the great secreting and excreting organs of the system,—the liver, skin and kidneys,—with catarrhal affections of the uro-poietic viscera favoring the formation of a colloid medium.

(6.) Injuries of the spinal cord, from which a proper nervous influence over the mucous membrane of the urinary organs is lost; foreign bodies introduced into the bladder, producing cystitis, with its consequent muco-purulent discharge, from which the phosphates are precipitated.

In the section relating to hereditary influences he takes the ground that gout and calculus are nearly akin, one being the result of an excess of urate of soda in the system, the other dependent upon an undue proportion of uric acid; he tries to prove that they are two different phenomena springing from one and the same root, and that consequently the causes which produce the one must influence the other.

Owing to the want of time he was unable to enter into an extended review of the geographical distribution of calculous affections, and hence confined his remarks on this point to calculus in America.

The paper on the Medical and Surgical Treatment of Aneurism, by Prof. William Van Buren, of New York, was a very valuable compilation. The subsequent discussion was shared by Professor Lister and Professor Joliffe Tufnell. The latter

illustrated his remarks by means of photographs and prepared specimens. Rest was the treatment he especially advocated. In regard to aneurism, Lister remarked that the question was not so much as to whether an aneurism were idiopathic or traumatic, but as to the amount of danger involved in surgical interference. If an aneurism were traumatic we at once cut down upon it and ligate the artery, knowing that no matter where we ligate the vessel will be healthy. On the contrary, in idiopathic aneurism we may have an artery which will not bear a ligature until we have dissected far up or down its continuity. In these cases it is almost as well to do the old operation at once.

Lister said he thought the old tourniquet much safer than is commonly supposed. He believes that when it produces ill effects it has not been rightly adjusted, or it has been left in the hands of unqualified assistants. Syme had only one death in forty cases, and this because he had used compression. Lister then described his treatment of nævi, by strangulation, the only modification being the use of carbolized catgut ligature.

Dr. John Ashhurst, of Philadelphia, then said that in regard to the abdominal compression, Prof. Pancoast had not claimed the credit which belonged to him. He was too busy a man to publish all he did. "But," said Dr. Ashhurst, "Professor Pancoast invented a compressor which antedated Lister's instrument about two years," although it was acknowledged that Professor Lister's compressor was more perfect. Dr. Ashhurst felt that as an American he ought to claim thus much credit for a native surgeon.

Prof. Joliffe Tuffnell then informed the section thatin 1835 LeStrange, of Dublin, left his collection of surgical instruments to two colleges in that city, and that among them was a compressor, invented by LeStrange, proving that there is almost literally nothing new under the sun. But it was felt by some that Tufnell was not quite fair in this allusion to LeStrange's instrument, for it was a simple abdominal compressor, used only in treatment of aneurism, whereas Pancoast's compressor was invented and used entirely for the purpose of checking and controlling hæmorrhage during operations at the hip-joint, so that a

comparison of two similar instruments which were invented for entirely different uses should not have been made.

It was then announced that Professor Estlander, of Finland, would read, on the following day, a paper on Osteo-Sarcoma, and another on Vesicle Disease in Finland.

In reply to a question concerning his statement that animal ligatures became reorganized, Lister said, "I do not claim that the ligature comes to life again, but that it disappears particle by particle, the place of each decaying particle being filled by a new one, just as in rebuilding a wall we might put a new brick in the place of an old one."—*Boston Medical and Surgical Journal, Sept. 14th.*

(*To be continued.*)

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Aneurism of the Arch of the Aorta—Pressure on the Great Veins—Death and Autopsy. Under Dr. RODDICK. Reported by Mr. R. W. POWELL.

J. H. was admitted to the Montreal General Hospital on January 13th, 1876.

History.—Born in Ireland. For twenty-one years served as a soldier in the British army; left it eight years ago. Since he left the army, he worked five years in Ireland and the remaining three in Canada as an ordinary laborer. Never considered himself very hard worked in the army except during the Indian Mutiny, when he had to undergo some very hard work such as forced marches, &c., and on many occasions on short rations. While in the army he admits to have been a pretty hard drinker, but has not indulged to such an extent since, although he certainly has not been a total abstainer.

He has also a history of primary syphilis sixteen years ago; beyond that he has always enjoyed good health up to the time of his present attack, and from what can be learnt has a good family history.

About a year ago he suffered from a continued shooting pain in the right side, beginning a little above the right nipple and extending through to the scapula. This he attributed to a slight rheumatism, but did not get relief from it for several months. Does not remember ever having had an attack of dyspnœa, or huskiness of voice.

Three days ago he went out into the yard with nothing on but his trousers—nothing on his body or feet. Remained out only a few minutes, and then went to bed.

That night he felt very uneasy in bed, and, as he expresses it, "stuffed up." Next morning, feeling no better, and noticing his neck was slightly swollen, he presented himself at the out-door department of the Montreal General Hospital, where he received some medicine, and, at the same time, was told to return the next day if he did not improve. He returned on the following day, and was admitted.

Present Condition.—When examined, his nose and ears were slightly swollen, and his face appeared as if studded with specks of gunpowder. He felt himself a peculiar stuffy feeling about the neck and nostrils, but his general health was not much disturbed.

He is a large, heavily-built and well-developed man.

Jan. 14th, 1876.—To-day his face and neck are still more swollen and of a somewhat livid hue, eyes watery and ears cyanotic, extremities cold, and both hands and wrists are somewhat blue, their circulation being sluggish.

Pulse 84, full and soft; tongue slightly furred, and bowels regular.

Near the right sterno-clavicular articulation there is a distinct bulging or prominence extending down the chest for the space of a handsbreadth, coupled with redness of the cellular tissue covering it. Over this space, percussion elicits a dull note. On placing the stethoscope over this prominence there is heard a very intense systolic blowing murmur, diminishing in intensity towards the heart and down the sternum. This murmur may be traced distinctly along the lower margin of each clavicle to its acromial end, being most distinct on the right

side ; also heard behind, in the vertebral grooves, loudest above and on the right side, but can be traced down either groove for some distance. Heard also in either axilla, loudest in the right, and may also be traced up the carotid vessels on each side of the neck. Pulses on either side are symmetrical, as also are the pupils.

Was ordered milk diet and beef tea and 4 oz. of whiskey; also quin. sulph. gr. ij., potass. chlor. gr. v.; 4 q. h.

At the same time complete rest in bed, in the recumbent posture, is strictly enjoined.

Jan. 15*th.*—Passed a tolerably good night. Eyelids were swollen to-day. Bowels not having moved he was ordered a dose of ol. ric., and at the same time the following: potass. iod. gr. xv., tinct. digit. m. v. in water ; thrice daily.

Jan. 16*th.*—Very restless last night ; face more swollen and livid to-day, and a slight pulsation may be felt in the tumor.

Jan. 17*th.*—Redness and cyanosis increasing; slightly delirious at night, and very restless. And the murmur, if anything is increasing in intensity.

Jan. 18*th.*—Pulse 84; full. Congestion in the face now becoming extreme, and breathing is louder. Redness on the chest is increasing, and extending down the right side.

This morning was seized with an attack of dyspnœa, which lasted two hours. Brandy was administered freely, and a large sinapism placed on the chest.

In placing the hand on the right side of the prominence on the chest a slight vibratory thrill can be detected, but the redness prevents it from being as distinct as it otherwise would be. Whiskey increased to 6oz. daily.

Jan. 19*th.*—Pulsation over the tumor is now very distinct. Complains of feeling cold ; very thirsty, and craves for stimulants ; pulse 84. Was given a draught of chloral hydrate last night. Urine high-colored, and contains a copious deposit of lithates.

Jan. 20*th.*—Pulse 84. No change in his appearance. Has passed, during the last 24 hours, only 15oz. of urine, thick and turbid from the presence of lithates: sp. gr. 1.036 : contains

neither albumen nor sugar. Was ordered: spts. ammon. arom., ℥iv.; tinct. valer. ammon., ℥iss.; ext. seneg. fl., ℥i.; syr. simplic, ℥i.; aquæ ad ℥vi. Tablespoonful three times a day. The pot. iod. to be continued.

Jan. 22nd.—Yesterday passed 15oz. of urine, and to-day 25oz. Still high-colored; eyes almost completely closed now, so great is the œdema; lips very thick; very restless; speaks thickly and indistinctly.

Jan. 25th.—Has continued much the same to-day; pulse is weak and irregular; brandy ordered to replace the whiskey.

Jan. 26th.—No further change.

Jan. 29th.—Still much the same. Has a slight cough, and some bronchial rales can be heard at the root of the lungs.

Feb. 1st.—Breathing becoming more obstructed, evidently from œdema glottidis. He was more restless than ever during the night, and had to be forcibly retained in bed early this morning by some assistants.

Feb. 10th.—This condition of things continued until to-day, when it was noticed that the œdema was not so great in the head and face, the eyes being opened more easily and speech becoming clearer, and at the same time the arms are becoming œdematous.

Feb. 14th.—Œdema in the arms increasing. Bowels not having been opened for three days, he was ordered elaterium $\frac{1}{8}$ gr., potass. bitart. ℥ss.; two powders to be given, and the effect watched. These did not produce the desired effect.

Feb. 15th.—Cyanosis returning in the face; and the œdema is as extensive as it was before, although it still continues in the arms. He is now incoherent. This condition continued till 7:15 p.m., when he gradually sank and died without any further symptoms.

Autopsy—43 *Hours after death.*—On opening the chest, the first thing that attracted attention was a huge clot of blood, which completely filled the right pleural cavity. This was removed, and found to weigh fifty-two ounces.

The lungs were then removed from their cavities, and the parts cut completely through to the vertebral column. The

whole mass was then dissected up from below, stripping the aorta with it, till the arch of the aorta was reached. A deep cut was then made across the neck, getting behind the vessels, and the dissection carried downwards to the arch. The whole mass was then removed.

There was œdema of the glottis. The vessels of the dura mater did not seem very much over-distended, but time had probably been sufficient to allow them to empty themselves before the autopsy.

On carefully dissecting the mass of tissues removed from the chest, a large aneurismal sac was found to implicate the ascending arch of the aorta throughout its whole extent from the sinus Valsalvæ to the origin of the innominate artery,—which latter branch was in no way implicated. The sac was large enough to contain, I should say, a good-sized orange in its interior.

Its surface, especially anteriorly, seemed covered with a layer of inflammatory products, and the tissues were glued together. After carefully separating the pericardium from its attachment above and clearing away the débris, a wide opening was found communicating with the sac. This opening was situated about half an inch above the pericardial attachment and on the right of the sac, and was evidently the place where the sac ruptured into the right pleura.

The venous trunks seemed in their normal situation. The left vena innominata ran obliquely from left to right, and from above downwards across the back of the sac, and above the centre of the sac the right innominate joined it, and the venacava passed from thence to the right auricle.

Mitral valves were normal. The aortic valves, although a little thick, seemed quite competent.

An Iron Renal Calculus.—M. Laborde presented to the Société de Biologie a renal calculus, which chemical examination showed to contain 75 per cent. of peroxide of iron. Extraordinary as the fact may seem, of its authenticity there can be no doubt, for the calculus was passed by a *confrère* while taking a bath on account of intense nephritic colic. He was able to trace the migration of the calculus, which during an abundant hæmaturia he received in his hand.—*Medical Times & Gazette.*

Reviews and Notices of Books.

Cyclopædia of the Practice of Medicine.—Edited by Dr. H. von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. 2: Acute Infectious Diseases, 8 vo. pp. 751. Vol. 3, Chronic Infectious Diseases, 8 vo. pp. 672. Vol. 4 Diseases of the Respiratory Organs, 8 vo. pp. 806. Vol. 5, Diseases of the Respiratory Organs, 8 vo. pp. 712. By various authors.—Edited by William H. Buck, M.D. New York: William Wood & Co., 27 Great Jones street, 1875 and 1876.

We owe Messrs. Wm. Wood and Company, the publishers of this great work an apology for having neglected to notice these volumes as they issued from the press. In former numbers of our periodical we noticed volumes one and ten as they were received, we have yet to fulfil the tasks allotted to other hands, of recording an opinion of the other volumes, and although, perhaps, late in the day, yet it is not too late to draw attention to the continued success of the enterprize.

Vol II includes the second part of the infectious diseases. In this volume we have from the pen of Professor Thomas of Leipzig a full account of varicella, measles, rubeola or roseola which are taken by our authors as indicating the same disease, and scarlet fever. Some considerable difference of opinion and confusion exists in the use of the term rubeola; by the older authors and some moderns, it is used to signify the disease measles, which has a regular period of incubation, though, according to Sir Thomas Watson, the expression is applied by some authors to signify what he terms "the occasional though rare combination of measles and scarlet fever; a hybrid of the two." Certainly, so far as we have ourselves observed, roseola, or rubeola of our author, is a distinct disease. Scarlatina is considered at full length, though we cannot but call attention to the term employed which according to Mason Good, "though used by most modern writers is a barbarous and unclassical term.

Dr. Curschmann gives us an excellent chapter on small-pox, that gentleman having enjoyed unusual advantages in observ-

ing that disease, as City Physician to the Small-pox Hospital of Mayence during the epidemic in 1870 and 1871, when it was very prominent in that city.

The next paper we have is by Dr. Zuelzer, who takes up the subject of erysipelas, miliary fever, dengue, influenza, and hay fever. Speaking of this latter the author notes the fact that all temperaments are liable to its attacks, but more especially the nervous, and that, to a certain extent, hereditary predisposition has been observed. With regard to period of the year, May, June and July are the months during which it is most prevalent, also sometimes in the spring and autumn. After a dissertation by Hertz upon malarial diseases, this volume closes with a paper on epidemic cerebro-spinal meningitis, by von Ziemssen: in this latter paper are given several temperature charts in illustration of cases reported.

Vol. III is devoted to chronic infectious diseases. In this are discussed syphilis, infection by animal poisons, as glanders, anthrax, hydrophobia, the foot and mouth disease, or aphthæ epizooticæ, the infection by the bite or sting of poisonous animals, and lastly the diseases arising from migratory parasites. These papers, all of importance and deep interest, are from the pens of Professor Christian Bäumler, Professor Otto Bollinger, and Professor Arnold Heller. In this latter paper Prof. Heller omits all notice of the Dracunculus or Guinea worm, besides a number of other parasites, but as he himself states according to his classification only a small number of parasites come up for consideration under the heading of those that penetrate into the tissues, thus, under this caption he considers alone of the cestoda, the echinococcus, and the cysticercus, and of the nematoda, the trichinæ.

Volumes IV and V are devoted to the diseases of the respiratory organs. In Vol. IV we have papers from Drs. Fraenkel, von Ziemssen, Steiner, Riegel, and Fraentzel. Diseases of the nose, larynx and pharynx, are discussed by Dr. Fraenkel. Von Ziemssen takes up the consideration of anæmia, hyperæmia, hæmorrhage and catarrhal inflammation of the laryngeal mucous membrane. Croup is the next disease considered, with croupous laryngitis, and diphtheritic croup, which are from the pen of Dr.

Steiner. Riegel gives a paper on diseases of the trachea and bronchi, including croupous or fibrinous bronchitis, bronchitis with the formation of fibrinous casts, foreign bodies in the trachea and bronchi, and bronchial asthma, &c., and Fraentzel describes pleurisy with its various terminations, hydrothorax, hæmathorax, pneumothorax, tuberculosis of the pleura, and malignant growths in the pleura.

In Vol. V. will be found papers on croupous pneumonia, catarrhal pneumonia, and embolic pneumonia, by Professor Juergensen. Professor Hertz takes up the subject of anæmia, hyperæmia and œdema, hæmorrhage of the lungs, atelectasis, atrophy, hypertrophy, pulmonary emphysema, gangrene of the lungs, new growths in the lungs and in the mediastinum and animal and vegetable parasites in the lungs.

Professor Ruehle gives two papers; one on pulmonary consumption, the other on acute miliary tubercle. These are supplemented by a pathological description of chronic and acute tuberculosis, by Professor Rindfleisch.

Vol. XI, which we have just received, is a first instalment on diseases of the nervous system. This we will consider at greater length in a future issue. Perhaps it is as well that we have not noticed these volumes as they appeared, inasmuch as the present notice will give our readers a view of the general scheme of the work. It has apparently been the aim of the editor von Ziemssen, to select men amongst his countrymen to write the articles on subjects upon which they have, to a certain extent, become authorities. Each paper is a monograph in its way, and is a fair exponent of the literature of the subject under discussion. The profession owe a debt of gratitude to the gentlemen who have undertaken the translation of these volumes, and we trust that they will meet with liberal support, as few physicians can afford to be without these volumes, more especially if they desire to become familiar with the advances that have been made in medicine during the past few years.

The paper and print is all that can be desired. The translation is very clear, and typographical errors few. The publishers have apparently spared no expense in rendering the work superexcellent in every respect.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Differential Diagnosis.—Hitherto we have been taught that it is possible by means of physical examination, to diagnose the presence of fluid in the pleural cavities, but that no auscultatory differences resulted from different kinds of fluid; in other words that dropsical, sero-fibrinous, and purulent fluids were all alike in the transmission of sounds to the ear of the listener.

Baccelli's work goes to prove the very opposite; namely, that the variety in the auscultatory phenomena will enable us to form an opinion as to the nature and constitution of the fluid in the pleural cavity. In order to form such a precise diagnosis, all disturbing sounds must be as far as possible excluded. The person whose chest is being auscultated should turn his face whilst speaking in a direction which is, as nearly as possible, opposite to a diagonal drawn through the very middle of the effused fluid. The ear which auscultates should be pressed close against the chest which is examined, and the free ear should be closed with the index finger of the corresponding hand. By auscultating in this method, Baccelli has found that the thinner and more homogeneous the fluid in the pleural cavity is, so much the more easily, perfectly, and to greater distances will it transmit the vibrations of the voice, and even whispers. The principal conduction of sound is at the lower part (bases) of the collected fluid; whispered words are, however most clearly accentuated, along with bronchial expiration, when the fluid is nearly homogeneous (serous effusions). The upper part of the effusion conducts sound worst, for there neither bronchial breathing nor loud talking can always be heard. In proportion to the thickness of the fluid, the conduction of sound is hindered. Hence effusions with fibrinous flakes, or with blood and pus-corpuscles, conduct sounds badly. A true empyema is the worst conductor of sound of all the effusions. Fluids with granular corpuscles, fat, and fat-crystals, and other not morphological or

fibrinous elements, behave, as regards auscultation, very much like hydropic effusions. The physical explanation appears to be as follows. Unlike gases, fluids conduct tones with intensity proportioned to their lightness and homogeneousness; whilst the waves of sound are conducted somewhat more quickly, but with diminished intensity, through thicker and heterogeneous fluids, which are mingled with elastic, solid bodies. In the case of mixed coagula and corpuscular elements, as well as in the case of exudations enclosed in thick, villous membranes, there is, in consequence of this mixture and variety of conducting media, more and more reflection [? refraction] of the sound-waves, instead of their being conducted in almost straight lines, as in the case of homogeneous endopleural fluids, which are strong conductors. At the point where the lung is most compressed, towards the base of the exudation, the sound-waves are probably reflected but little, and thus little decomposed. In other words, they are not much affected by interference at this spot. It is, perhaps, on similar acoustic principles, that a pericardium, so distended with fluid as to be absolutely dull on percussion, often conducts bronchial râles from adjacent portions of lung with remarkable clearness [Skoda's consonance, or phenomena o resonance of Baccelli.]

The importance of deciding on the nature of the contents is obvious, in relation to paracentesis thoracis.*—*Berlin Klin. Wochenschrift.—Med. Record.*

Hospital Gangrene.—(*The Medical and Surgical Reporter*, April 15. 1876.)

In a paper in the Archiv für Klin. Chirurg., by Prof. Von Nussbaum, some details of much practical importance are given with regard to the prevention and curative treatment of this affection. In 1872, the first year of its appearance in the hospital, the gangrenous condition of the wounds in those attacked was always readily and successfully controlled by the local application of lotions containing nitrate of silver, corrosive sublimate, or carbolic acid; but as the distinctive changes became more

* Baccelli and Valentiner.

and more acute, it was found necessary to have recourse to more active means, and to apply caustic paste and the actual cautery. Energetic applications of the latter agent proved the most efficacious, and a perfectly successful result of such treatment was usually indicated by a previous fall of the patient's temperature. During the prevalence of the gangrene many different attempts were made to protect healthy wounds and sores from contagion. The continuous water bath, applications of ice, moist warmth, lotions of carbolic acid, salicylic acid, chlorine water, etc., were tried without good results Finally Lister's antiseptic plan of dressing was practiced most strictly, so that no open surface was dressed save under the carbolic acid spray, and no instruments or dressings used save after careful disinfection. Hospital gangrene at once ceased, and not a single case has been observed in Prof. Nussbaum's ward since the adoption of this plan of dressing, although at the period of its first use eighty per cent. of the surgical patients had been affected. He holds that the secret of Lister's method lay in the pedantic exactness in its mode of application.—*Chicago Medical Journal and Examiner.*

Formula for Migriane.—M. Fort recommends the following:—Sulph. quin. gr. xv., pulv. bellad. gr. iv., ext. digital. gr. vijss, ext. valerian gr. xv., mel. q. s., ut f. pil. xx. Whatever may be the length of the interval which separates the paroxysms—whether a week, or month, or more—the patient should take the twenty pills, commencing four days before the expected recurrence of the paroxysm, when he will take one in the morning fasting, and one at bed-time; next day he takes three—two in the morning, and one at night: the day after that he takes six—three in the morning, and three at night; on the day before the paroxysm is expected he will take nine—four in the morning and five in the evening. If the expected paroxysm be not in this way prevented, it will, at all events, be mitigated, and the patient will recommence his course of pills four days before its expected successor.—*Med. Times and Gazette.*

CANADA

Medical and Surgical Journal.

MONTREAL, OCTOBER, 1876.

SEMI-ANNUAL MEETING OF THE COLLEGE OF PHYSICIANS AND SURGEONS, C.E.

The semi-annual meeting of the College of Physicians and Surgeons was held at the University of Laval in the city of Quebec, on Wednesday the 27th September, ult., when besides the usual routine business of the College, matters of very great importance to the Profession in this section of the dominion were taken up and discussed, and a definite policy adopted in respect to seeking Legislative amendment to our present act of incorporation. The bill as submitted by the committee appointed at the meeting in May last, for the purpose of drawing it up, was with some few alterations unanimously adopted by the meeting, and was ordered to be submitted to council and properly prepared so as to lay it before the Local Legislature of this Province, at its next session, with a view of its becoming law. There are some features in this bill to which we will draw attention. All persons entering on the study of medicine in this Province will be required to pass an examination on subjects of preliminary education, and obtain a certificate of qualification from the Provincial Medical Board. No change from the present system so far as the subjects examined on is contemplated, but the examiners are to be selected from amongst those actually engaged in the work of general education, and the subjects to be examined on are very much the same as those demanded by the General Council of Medical Education and Registration of Great Britain.

Again, all applicants for licence will be required to hold a

diploma, or certificate of qualification, from some University or incorporated school of Medicine, approved of by the Board. This will be evidence of a comptete course of study, after which the candidate shall be required to pass an examination as to his knowledge and skill, for the efficient practice of Medicine, Surgery, and Midwifery, which shall entitle the candidate to registration, under this Act, and he shall receive a license *ad practicandum*. The Provincial Medical Board shall appoint examiners, nine in number, by whom all candidates for licence to practice shall be examined. No governor of the College shall be an examiner, if he accepts that office for the time being he shall cease to be a governor. Of the examiners one shall be chosen from each of the four medical schools now existing in this Province, and the remaining five shall be chosen from amongst the registered Medical Practitioners, not connected with any of the teaching bodies. These are a few of the prominent features of the bill, but we shall endeavour in our next to give the bill in full, after it has passed in review before the Council, and put into shape to be laid before the House.

At the meeting in Quebec, there was one motion, which, however, was not sustained, about which we have to make a few remarks : It was moved that all present Licentiates of the College shall be admitted members without the payment of the customary fee. This would be eminently an injury to those members already in good standing, and would be seriously deteimental to the best interests of the profession. It is a question of great importance as a profession, we look for its advancement, and that advancement can alone be secured by united action. To lay the matter fairly before our readers, we must explain that the profession already holds corporate rights, and that this bill is one of amendment, and not an act incorporating the profession anew. The corporation of the Co llege of Physicians and Surgeons has already an existence, and is doing the work assigned to it by the Legislature of the country. It holds property in cash amounting to somethin less than $3000. This property belongs legitimately to the members of the College. The right of becoming a member of the College is open to all

Licentiates of four years's standing on the payment of the sum of $10, with a subscription of two dollars per annum. All members in good standing are eligible for election as governors, and every third year thirty-six governors are elected to conduct the business of the College. To admit all the present Licentiates of the College without fee would be a serious blunder, and would preclude all hope of future advancement, of a permanent character.

We have been asked on several occasions what good is to be derived by complying with the present existing law and contributing to the funds of the College, we are asked to point out what has been done of a substantial nature, where is there a College building, and where a Library of reference. Has it never struck the gentlemen holding these views that so long as they hold aloof so long will the College exist as at present, receiving each year in fees what barely defrays the expense of management? If, as a profes s, we desire to possess a location, and a library of reference, these good things cannot be obtained without means. But yet another suggestion was offered, but which was on a division lost by a large majority of those present voting against it. It was moved that all licentiates, on receiving their license, should be at once admitted as members without the probationary period of four years, as under the existing act; and it was argued that young men entering the profession would be more likely to take an interest in the college, and effectively work it, if they were at once admitted to all the privileges offered without waiting for a period of four years to obtain those privileges. To this we can alone say that in all other similarly constituted bodies a period of probation exists, which is looked upon as a most conservative measure. It works to advantage in other countries, and we should suppose it will be equally so in our own. Space will not permit our saying more on this subject at present, but we trust that if legislation we are to have, we will receive at the hands of our Local Parliament what we demand and not what they, as our law-givers, may regard as best for us.

REPORT OF THE SEMI-ANNUAL MEETING OF THE COLLEGE OF PHYSICIANS AND SURGEONS.

The semi-annual meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada took place at Laval University, city of Quebec, on Wednesday the 27th September, 1876, when the following governors were present: R. H. Russell, M.D., President; Drs. Joseph Marmette and R. P. Howard; Vice-Presidents: Drs. H. Peltier, and A. G. Belleau, Secretaries; Dr. G. E. Fenwick, Registrar. Drs. A. Jackson, R. F. Reinfret, A. T. Michaud, E. A. de St. George. L. Tetu, P. Pelletier, C. Gingras, L. J. E. Desjardins, W. E. Scott, W. H. Hingston, J. P. Rottot, Hon. L. R. Church, J. B. Gibson, J. A. Duchesneau, F. X. Perrault, E. Landry, R. M. G. Mignault, E. D. Worthington, F. D. Gilbert, and F. J. Austin.

The Hon. Dr. T. Robitaille, a member of the College, was also present, and took part in the proceedings.

The minutes of the last meeting were read and approved. The report of the Auditors of the Treasurer's books, was also submitted and approved. The bill of Amendment to the existing Medical Act was submitted and received some modifications, after which it was moved, seconded, and carried unanimously, and was ordered to be submitted to Council so as to receive the necessary alterations prior to its being laid before to the Local Parliament of the Province of Quebec at its next session. Dr. Paré, of Sherbrooke, a Licentiate of over four years, who had been proposed and seconded at a former meeting, was duly elected a member of this College. The following Gentlemen, Graduates in Course of the several Universities named below having been duly sworn by the President, received their license to practice Medicine, Surgery, and Midwifery, and their names were entered in the Register, viz:

From Laval Uuniversity, Messieurs D. M. Brochu, P. E. Lemieux, G. Lechance, A. D. Lepage, M. A. A. Falardeau, T. Laliberté, F. A. Dion, P. G. Jennings, E. Beaudry, A. Pauquin,

C. A. Dubé, G. P. Tanguay, A. Lemire, A. L. Smith, and J. C. Maranda.

McGill University: Doctors. A. W. Marston, T. A. Greer, S. K. Falls, and A. L. Gilbert.

Victoria College: Drs. Francis E. Roy, and Herbert E. Shepherd.

Bishop's College, Lennoxville: Dr. T. G. Sheridon.

The following gentlemen having passed their examination in the preliminary branches were granted certificates to entitle them to enter on the study of the Profession of Medicine, viz: Messrs. A. Paradis, J. F. Landry, B.A., W. A. Verge, B.A., G. T. Morreau, A de LaCherotiere, B.A., C. Mayrand, E. Fourniere, J. A. Rochette, L. A. Genereux, P. Dubé, F. Campeau, E. Belcourt, E. O. Cloutier, A. Soulaid. This brought the business to a close, and the College adjourned.

BELMONT RETREAT.

We are pleased to learn that our friend Dr. Wakeham has resigned his practice at Gaspe in order to take the medical charge of this institution. This private establishment for the reception of insane patients has now become a deservedly appreciated retreat for the care and management of these only too numerous cases. From the gradual increase in the number of its inmates the desirability of having a resident physician has been for some time felt. Dr. Wakeham has had very extensive experience in the management of the insane in connection with the Beauport Asylum and we feel confident that the fact of his now devoting himself entirely to the interests of the Belmont Retreat will do much to raise it in the estimation of the profession of this province and elsewhere.

CANADA
MEDICAL & SURGICAL JOURNAL

Original Communications.

MEDICAL FACULTY OF McGILL COLLEGE.

LECTURE BY DR. GEORGE ROSS BEFORE THE FACULTY ON THE OPENING OF THE SESSION.

GENTLEMEN,—The introductory lecturer of Westminster Hospital last year very truthfully remarked that he was sure both speaker and students would much prefer a day's shooting to either giving or hearing an introductory lecture. This year the lot has unfortunately fallen upon me to perform that duty, and I cannot say that I have accepted the honor with feelings of unmixed gratitude, but must endeavour to accomplish the task as best I may. To those of you who are here for the first time as students of this University it is my pleasant privilege to offer, on the part of this Faculty, a hearty welcome. To those who having been, are returning here once more, we beg to say that we are glad to see you all, and trust you come filled with the determination to continue the prosecution of your studies with renewed zeal and interest. We do not for a moment suppose that the long vacation since last session has been to you simply a continued rest or interlude from study. On the contrary, we would believe that much of it has been spent in furthering your enquiries, and extending your knowledge of the subjects entered upon during the earlier portion of your curriculum. Some of you, indeed, we know have devoted much of

this time to following the practical courses originated this year for the first time in our University in the form of a summer session. And here I will remark that the institution of this summer session for practical courses and special series of demonstrations, was felt by the Faculty as imperatively called for and I feel that the appreciation accorded it, as shown by the unexpectedly large attendance, proves that its introduction has filled a want which was beginning to be felt. The number of subjects included in the study of medicine, has been for some years back steadily increasing. The standard of proficiency demanded in any of them has also been continuously raised. Now, the effect of all this has naturally been to magnify to a large extent the amount of technical knowledge it is absolutely necessary to obtain in order to pass the required examinations To accomplish this necessitates the employment of much time in purely didactic teaching, with lectures and weekly examinations; and thus against his will, the student finds himself to some extent obliged to give all his energies to the attendance on these and the mastering of their subject matter to the exclusion of other more practical and therefore more interesting and ultimately instructive and truly educational subjects—those I mean in which he himself is the actual observer, receiving his knowledge directly from the application of his own senses, such as practical physiology, practical chemistry, practical clinical work, ophthalmology, &c. The time of the student now during the winter session, is every moment so occupied by the acquirement of what he soon will need for the satisfaction of the examiners that what does not immediately bear on this is only too apt to be relegated to a later season, and then perhaps come ultimately never at all. And it is well to remember that science begins with the careful observation of facts, and ends with the systematic statement of what is observed, and this is the order and the way in which the student is most likely to be allured into studious habits and into a scientific frame of mind. Gentlemen it does not require that I should expand into any panegyric upon the profession of medicine. Your presence here to-day of itself, is proof sufficient that you deem that noble profession one worthy

to receive the devotion of your life. You are not indeed mistaken ; the profession of medicine affords to its votaries—those at any rate who are true and faithful to her teachings—a sure reward for all the toil and trouble they may take to enquire into her mysteries. It is in its essence a combination of science and of art. The science, like all science, is illimitable, and lays under contribution all true knowledge in whatever department it may have come to light. The art is continuously progressive, always improving and endeavouring to furnish the means of keeping pace with the scientific requirements. Here then, surely is a field large enough to satisfy the most ambitious for the employment of his talents and the occupation of his time. And then consider the subject matter. What is it that thus engages the attention of so many master-minds of every community who are always found enrolled within our ranks ? Nothing less than the study of man himself—man in all his relations, social, moral and intellectual—as well as purely physical. It is the study of the development of that noblest work of God—who was actually made in the image of his Creator—of his development traced from the microscopic maternal ovum to the perfect creature in all his pride of physical perfection and towering mental superiority. It is the study of the beauty, uniformity, ingenuity, and marvellous applicability to intelligent purpose of every separate portion of his wonderful frame. It is the minute examination by cunning mechanical contrivances into the very minutest recesses of every atom of every structure of which these parts are composed. The study of the chemical composition of all these varied tissues and fluids, the study of the changes taking place in this complex body as long as what we call life endures—the laws which govern changes and control function, and ultimate in causing death ; and after death the study of the appearances caused by prematurely perverted vital laws or found as a result of the great and universal law of finality. This constitutes the study of medicine proper, based upon a due understanding of anatomy, physiology and chemistry. Did the world so exist that simply men and women were born, lived and died with constitutions perfect and minds and bodies obeying always the healthy laws

of Nature, the end being simply brought about by a gradual change in the structures and organs of the body,—such as what we call old age—I say if this were the case, then would there never have arisen the necessity for medicine or physicians. But this is not so, and never will be. If it were, the studies of physiology and anatomy would then be followed simply for the obtention of knowledge and truth, and not with the view, as now, of making such knowledge subserve an ulterior purpose towards our race. In the earliest records of the human race we find evidences that disease, with all the pain and suffering it entails, was not unknown. Besides, therefore, studying as mere *dilettanti* the mysterious workings of the human body through simple thirst for knowing, it is a matter of the most vital importance to all mankind to have these mysteries understood and explained. The existence, then, of disease has led to the development of a system of therapeutics, or means of cure, medicinal or otherwise,—and to accomplish this we further require our armamentum, or Materia Medica, which furnishes us with the necessary means for the accomplishment of that end. You should never forget that the chief end and aim of medicine is to cure and to relieve. Lamartine has well said: "La médicine guérit quelquefois, soulage souvent, console toujours." Depend upon it, the public will never tolerate us or pay us fees merely to stand by the bedside of those they love as mere scientific observers, or a sort of Greek chorus, for although there be times when the highest wisdom is to hold our hand lest we rudely quench the struggling spark of life, it far more often happens that we can do much either to cure or relieve pain. But to do so we must learn all we can, and must ever be learning. Again, "Prevention is better than cure." That trite and well-worn adage is undoubtedly to be the coming watchword of the medical profession. You will at once perceive that I refer to sanitary science. It is not new. The code given by Moses contains admirable sanitary directions. But sanitation, *i.e.* the endeavor to preserve health so that we shall not have disease to cure, long fell into disregard. Of late years, however, we all know what energy has been applied

towards this most useful of all the useful branches of medicine. It is necessarily to medicine that the people must look to be taught the means for carrying out this desirable object. Medical men know more of diseases than other people do; they not only know much about the remedies that have to be employed, but they of necessity know much about the ways in which they may be prevented. Are they not then bound to use their knowledge for the good of mankind? Are they not bound to make that knowledge as perfect as they can? Sir William Jenner, in a recent utterance, said: "No one acquainted with the present state of the science and art of medicine will for a moment question that to prevent disease is its first and most important aim." And likewise Sir William Gull: "It is enough for us that diseases prevail to stimulate our best efforts for their prevention, without our asking a question beyond." Besides, think for a moment what has already been accomplished in this way. Look at the discovery of vaccination, the preventive of small-pox, the most terrible and fatal plague that ever appeared on the face of the earth. Ignorance and prejudice still exist against the reception of this inestimable boon—notably in this unhappy city of our own. But light must surely come some day to the darkened minds of the dupes of the Coderre school. A year ago the German Parliament passed a law making vaccination and re-vaccination compulsory throughout the empire. Let us hope that this will give us soon the unexampled spectacle of an entire country freed from this horrid pestilence by the wisdom and foresight of their rulers, guided by the teachings of sanitary science. The day will shortly come when every one of you whom I now address will be in a position to help in procuring the passage of a similar law in this country, and it will be your duty to do so—a duty you owe to the memory of Jenner. Again, think what the science of preventive medicine has done for scurvy, that decimator of the armies and navies of the world. It is virtually gone. Typhus fever has also almost disappeared, and we have a right to hope the day is not far distant when enteric fever will share the same fate. This faculty do not include this branch amongst those compulsory to the

student, and in doing this we have the support of the practice followed by nearly all the British universities. It is well that this fact should be stated, because a recent attempt has been made to discredit our curriculum on that account. The ultimate end of your study is to obtain a well grounded knowledge of the three great divisions of medical science and art—Medicine, Surgery and Midwifery. They constitute the triple structure upon which you are to build, and it is to be erected on a triple foundation. Anatomy, Physiology and Chemistry are the three corner-stones on which the erection is to be based. Materia Medica, Medical Jurisprudence and Hygiene are, in effect, based on and compounded of other sciences. Could you but have presented to you at once all the details of the work upon which you are about to engage it would indeed appear huge, colossal, impossible of attainment. Fortunately, you cannot thus grasp at once the entire range of subjects which you will have to traverse. But separate portions being successively laid before you, you will be able to seize them one by one, and finally end by possessing more than at first your most sanguine hopes would have induced you to anticipate. Timber to timber, stone to stone, and brick to brick, must be gradually, with toil and patience, put together—the entire structure of your knowledge. Do not, then, allow yourselves to become faint-hearted at the load of labor that presents itself to view, but only let its contemplation make you more earnest and determined to make good use of every moment at your disposal. I do believe that you need but little urging to work. But there are different ways of doing this work as every other. Done in one way the energies will be found to have been frittered and wasted and the result to be comparatively small, whilst carried on after a different method a much greater result will surely be achieved by a similar expenditure of force. Work applied to scientific pursuits differs much from that in letters pure. It has been well said that "learning and knowledge in science, as in life, are distinct: whereas in the world of letters learning and knowledge are one." In medicine you will quickly find that your books and your teachers are guides

only; you cannot depend on them exclusively. New problems in disease, caused by a never-ceasing change in the circumstances acting on the organism will speedily necessitate your judging for yourselves. The best teaching you can have is that which leads you to educate your reasoning powers instead of stultifying them by artificial tricks of memory, or other similar devices, which leave in the mind a verbal existence only instead of establishing therein some definite image. A recent periodical thus clearly puts this point: "A good or bad memory is a good or bad understanding. The faculty of recollection, or the power of recalling a piece of knowledge when it happens to be wanted, is chiefly a matter of *method*." It is useless throwing detached facts into the mind like loose pebbles into the sea. That is the way to lose them. Each point must be studied in detail, and when this is done a host of subsidiary facts and conditions will be discovered connecting it to other facts of memory with which it should be habitually associated. These secondary qualities and properties form the strings of thought by which Nature has ordained that the lessons she teaches shall be recollected. Artificial memories are miserable substitutes for the natural connecting links of knowledge thus provided. If, instead of wasting precious time and equally precious brain-power driving things into his memory, the student will devote an equal amount of energy to the full and exact comprehension of his work—for example, the facts and circumstances that determine the number, shape, and direction of the ridges on a bone, or the foramina by which it is perforated, the course and relations of an artery, the number and distribution of the branches it gives off—he will not only have the subject fixed more permanently, but he will acquire so much collateral information in this natural process of study, that presently he will find himself making unexpected progress. In short, it is good policy to leave the contingency of remembering alone, and to concentrate the whole attention on the present duty of learning with the warning consciousness that nothing is "really *learnt* which is not thoroughly understood." Medicine is advancing daily, and in such advance "the ultimate

court of appeal is observation and experiment, and not authority," and the sooner you educate yourselves to observe, clearly and carefully, and to draw correct inferences from your observations, the more self-reliant you will become, the less liable to be turned hither and thither by every new-fangled idea in medical doctrines, and the less servile a follower of some dominant theory or captivating teacher. "L'homme," says Paschal, "est visiblement fait pour penser ; c'est toute sa dignité, et tout son merite, et tout son devoir est de penser comme il faut." Thus the more the didactic lecture system is supplanted by the constant concurrent employment of practical demonstrations and investigations in which the student himself is the active worker, the more true to its real purpose will the teachings be. To enlarge this sphere of education is the tendency of all progressive establishments for the instruction of students of medicine. In this College a large field is opened out to you by the ample opportunities afforded in a carefully-conducted dissecting-room—a laboratory for practical chemistry—courses of practical micros copy, and a large hospital, where clinical work is much insisted upon. And here I would like to express a hope that before long our student may also be found in possession of an efficient physiological laboratory, an object which the present requirements of a complete medical education absolutely demand. Indeed it is not too much to expect that the Introductory of next session shall contain an allusion to this addition as a then accomplished fact. Your aim then should not be to learn servilely for the mere purpose of knowing so much, but to learn so that you may be by so much the better educated. Even so, the absolute handiwork of your profession must never be neglected. The habit must be acquired of being able to use your hands and to use them well. Without this, when brought face to face with actual disease or accident, all your knowledge is in vain. A surgeon once pithily said of one of his dressers, "He has learnt everything ; he can do nothing." He alone is learned who reduces his learning to practice, and practical skill without learning degrades our profession to the level of the days of barber-surgery and mediæval medicine. I need hardly say that it is only

in hospitals that a student can acquire this manual dexterity. Frequence and regularity in attendance at the hospitals cannot be too much insisted upon. Care, attention, and application to the work going on there cannot be too much commended. It is often quite possible to forecast the probable future success as practitioners of medicine of the individual members of any class by an observation of their daily conduct in these respects. Trousseau calls the clinique the cope-stone of medical study. I do not consider that I detract in any way from the relative importance of any of the other branches, if I permit myself to add a few more words to you on the subject of clinical study, in which I am myself more immediately engaged. Frequent practice in hospital wards, we have said is absolutely essential for abtaining familiarity with surgical manipulations. So, also similar, though different, practice is equally essential for acquiring the ability to institute a practical diagnosis. The first requirement for an accurate diagnosis is to learn to recognize morbid signs. This is what you have to learn to be able to do, and it is practice alone, the constant exercise of one's own individual faculties, his sense of sight and hearing and touch and smell, which will ever make him proficient in the art. To be able to recognize morbid signs you must accustom yourself to be about and amongst sick people, constantly examining, enquiring and observing. Book learning alone can never suffice to enable you practically to interrogate patients, to know and appreciate healthy and morbid physical signs and sounds—to handle and intelligently use our aids in physical examinations, the stethoscope, ophthalmoscope, thermometer and laryngoscope, to estimate peculiarities, mental and physical, of various individuals, to ascertain the true action and therapeutical value of various drugs, to be familiar with the pathological appearances presented by the human frame diseased. All these and a thousand other things can be acquired by experience alone, and to enable a student to obtain this experience he must frequent his hospital and must study medicine clinically. "When you are young," said the great Trousseau, "let your fields be the hospitals and the clinics, and when your knowledge has increased

let the hospitals and clinics still be your fields of industry. By pursuing this plan you will attain expertness in your art, knowing what science teaches and having the power within yourselves of originating." In former days didactic teaching had not been systematized, experimental investigations, morbid anatomy and reasoning therefrom were hardly dreamt of, but observation alone was trusted to obtain a stock of medical lore. To illustrate which, and to contrast with the education of the present day, I may quote for you the following passage from a book more than 200 years old, entitled " The Accomplisht Physician, the honest Apothecary and the Skilful Chirurgeon." It says : " First, it's most necessarily requisite our young student should be perfectly instructed in the Latin and Greek tongues, being the universal keys to unlock all those arts and sciences, and no less a grace to the future physician. Secondly, being thus qualified for a student, he ought to apply himself close to the study of philosophy, for which Oxford and Cambridge may justly challenge a pre-eminence over other Universities. But because, according to the first master, Hippocrates, art is long and life is short, he ought to ingage his diligence, to absolve his philosophical course in two years at least, and in the interim, for his recreations and divertisements, enter himself scholar to the gardner of the physic garden, to be acquainted with the fætures of plants, but particularly with those that are familiarly prescribed by practitioners to prevent being outwitted by the herb-women in the markets, and to enable him to give a better answer than it is storied once a physician did who having prescribed maiden hair in his bill, the apothecary asked him which kind he meant. T'other replied, " some of the locks of a virgin." Thirdly, Supposing our student to have made a sufficient progress in philosophy, he may now pass to Leyden, and enter himself into a Collegium Anatomicum. A proficiency in that part fits him for a Collegium Medigium Institutionum, and afterwards a Collegium Practicum, and then it's requisite he should embrace the opportunity of visiting the sick in the hospital twice a week with the Physic Professor, where he shall hear him examine those patients with all the exactness imaginable, and point at every disease and its

symptoms as it were with his finger, and afterwards propose several cases upon those distempers, demanding from every young student his opinion and his grounds and reasons for it, withal requiring of him what course of physic ought to be prescribed." He then advises the student to live a year with an apothecary to learn compounding, to sojourn another year with a chirurgeon, so as to see him dress his patient's wounds, and thus to acquire that art also. He must then visit Paris, Boulogne, Montpelier and Rome, and see the practice of the great physicians there; by which, he remarks, one will be raised far above those vulgar ones who have never felt the cold beyond the chimneys of their homes. Of this travelled and accomplished physician it is finally observed: "The vulgar will then be able to discern the difference between him and the ordinary churchyard physicians, who by their sordid deports and dangerous practices make it their business to ease the blind people of the weight in their pockets, and plunge them into worse diseases." Now, gentlemen, I think, I have spoken enough about work, let me say a word about its lawful opposite—rest. You, above all others, should remember that brain-work as well as all kinds of physical work or manual labor requires for its accomplishment destruction of matter. The one therefore no more than the other, can be *continuous*—the attempt to make it so, or nearly so, must surely and inevitably lead to failure. Do not then fall into this error. Regulate your hours of study, so that they shall not interfere with a rational amount of suitable exercise and needed repose. Regularity and steadiness at your work will always enable you to do this. The arrangements of the curriculum may appear to you in many respects unreasonable. They are not perfect. But bear in mind that the parts which seem to you to be faulty have objects which you may not now perceive. Patiently endeavour to make the most of what appear to you its useless provisions. Your patience will often be tried by having to listen to what seems out-of-place accounts of departments of knowledge as yet quite unfamiliar. Do not "cut" lectures because you do not see their value. Endeavor to attend them regularly and to carry away as much as you can, and you will find your sub-

sequent work in other subjects as well as in that department rendered easier. There are two kinds of students who are apt to suffer from overwork—one is the extra-diligent student, working hard and striving, it may be, for a prize. To him we would say: Be careful; the last straw breaks the camel's back. There is a limit beyond which you cannot safely go. The other is he who, having let slip precious hours as the session has glided swiftly by, wakes up at last to the alarming consciousness that he must prepare to meet his examiners. To any who feel conscious of an innate tendency to slothfulness or procrastination we would say: Be diligent from the outset, and then at the end there will exist no necessity for that excess of work against which we now would warn you. Work therefore, but also rest, and be sure your efforts will be crowned with success. Manner is probably more looked to in the practising physician than in one of any other profession, and naturally so, because, being frequently from the nature of his calling intimately and confidentially associated with persons themselves of refined and cultivated manners, anything less on the part of a medical attendant is necessarily criticised, and is obstructive to his success. Aim, therefore, to cultivate during your pupilage kind, genial and considerate conduct towards each other, and towards all, which will surely mould such an habitual demeanour as it should be your desire to possess. Believe me, the age of Abernethian asperities is not the present—nor suppose that it is an indication of a virtuous and independent mind to speak curtly, gruffly or unsympathizingly to the sick. On the contrary, a kind word is always in place, and is sure to carry its own reward. I would conclude, gentlemen, by once more bidding you all a cordial welcome, expressing a hope that this session will witness a continuance of the same mutual cordiality and confidence which has always hitherto characterized the relations of the teachers and classes of McGill University.

THE TREATMENT OF DIPHTHERIA.

By G. R. Cook, B.A., M.D., Gananoque, Ont.

As the treatment of diphtheria is receiving a great deal of attention at the present time, the experience of even a junior member of the medical profession may not prove unacceptable. During the past three months twenty-four cases of diphtheria have come under my notice, most of them occurring in children.

The first was a girl aged twelve years, previously strong and healthy, who was suddenly seized with pain in the head and throat, accompanied by great depression of the bodily powers. As she had previously had tonsillitis, not much alarm was felt in the family, and the usual household remedies were employed. After forty-eight hours, as she became much worse, I was summoned, and I found the tonsils, uvula and pillars of the fauces covered with dirty grey or ash-coloured patches, while there was so much swelling that she could scarcely swallow, and the attempt caused her much pain.

Recognising the severity of the case, I at once proceeded to treat according to the rules laid down by our Professor of the Practice of Medicine, and also after the manner of that celebrated German, Oertel. But, alas! each dose of medicine (iron in full doses, quinine to control the temperature, and sulpho-carbolate of soda as a parasiticide) seemed to give the disease a fresh impetus; each hot application to the neck apparently called up a fresh feast for the micrococci; each inhalation of steam only caused these microscopic organisms to seek refuge in the deeper tissues; and the constantly repeated gargling with solutions of chlorate of potash, chloride of sodium, chlorinated soda and solutions of carbolic acid and iodine, utterly failed to lessen the fetor which emanated from the mouth and nostrils. Nourishing diet and stimulants were given at regular intervals, but, notwithstanding the good nursing and treatment, both dietetic and medicinal, which she received, each succeeding effort to rescue the sufferer from the grasp of such myriads of living organisms was attended with more discouraging results

than the former one, until after an illness of six days septicæmia struck the fatal blow.

Since this, I have adopted a different mode of treatment, which has been attended with much success. Upon recognising a case to be one of diphtheria, I at once order a purgative, and I prefer a saline. The circulation is much disturbed, the head and neck being very hot and dusky, while the feet are cold and clammy; I therefore next endeavour to restore the equilibrium by bathing the feet in water as hot as it can be borne, until they glow—in some cases repeating this hourly, and continuing to do so at intervals, as it may be necessary, for two or three days, at the same time towels wrung out of ice-water are applied to the forehead and throat, and changed as often as they become warm, which at first appears to be almost every minute. These I continue night and day until evidences of local excitement are subdued. The patient is to use ice constantly during this treatment. The medicinal treatment I look upon as of equal importance, and is a valuable adjunct to the cold. To eight ounces of a saturated solution of chlorate of potash, one drachm of hydrochloric acid is added, and a teaspoonful every three hours is given to a child of three or four years of age—the dose for children of six years and upwards being a dessertspoonful. In some cases this mixture is given alternately with salicine every two hours, as I believe that the latter, besides possessing antiseptic powers, promotes digestion. Sometimes the mouth is washed out or gargled with a solution of chlorinated soda, but with this exception no gargle is used.

Stimulants and nourishing diet in a liquid form are given from the outset, and of course special symptoms must be treated as they arise. I do not know whether the cold destroys the microscopic organisms directly, or whether they cease multiplying and die because the action of the cold on the affected textures deprives them of support, but the latter, I think, is the probable cause, as after a few hours' perseverance in the treatment the mucous membrane becomes pale and bloodless, the patches cease to spread, the ashen hue turns to white, the breath soon becomes sweet, and a bright line of demarcation

separating the affected from the non-affected portions may be distinctly seen to retreat and carry with it the crumbling edges of the patches until all are obliterated.

I have treated upon my plan nineteen cases, some being well advanced and severe, and in no instance has the disease lasted beyond seven days. Not one proved fatal, and only one showed symptoms of diphtheritic paralysis, from which, however, a perfect recovery was made. To strengthen what I have said, I may add that diphtheria proved very disastrous to some families in this locality, suddenly sweeping away all the younger members, notwithstanding all the efforts of the attending physicians.

Correspondence.

London, Sept., 1876.

My Dear Mr. Editor ;—In keeping with a promise, made to you last spring, I propose to give you a short and imperfect account of the medical sights one may see in a short stay in Paris. As you well know, there are so many Canadians who have visited the London Hospitals, so many who are at present here, and so many who are likely to come over at one time or another, that it is unnecessary for one to enter into any description of them or to tell you of the various modes of practice to be seen in England. Not many of us make their way to France, and of these few the majority hurry to Germany, now so thronged with foreign students.

In writing a letter of this kind, two extremes are to be avoided. If you confine yourself to personal experiences your writings will savour of egotism, whilst on the other hand, if you deal merely with general facts you put yourself under the suspicion of having filched your information from the Paris Guide-book.

The Parisian Hospitals are all governed by one board, that board being under the direct control of the Government. This system possesses many advantages, as we can readily imagine, but on the other hand there is a lack of that rivalry between

hospitals which acts so beneficially in keeping up the efficiency of the staff, and in creating a desire to afford the students the best instruction possible.

Another feature which seems peculiar to French hospitals, is the large amount of work done by the "internes" or house staff. These appointments are held for a space of four years, and during that period the men are changed from hospital to hospital, so that when their time expires they have had extensive experience both in the general and special departments of the profession. The Hôtel Dieu is always the first place visited by strangers, on account of its being the oldest and the best known of the Parisian Hospitals, as well as by reason of its proximity to the Cathedral of Notre Dame, one of the finest sights in the place.

The interior of the building with its small narrow staircases and passages, reminds one not a little of the tower of London. The wards though low and rather too crowded, are kept beautifully clean and neat. Like most foreign wards they are very large, some accommodating over a hundred patients. The surgical practice of the Hotel Dieu seems very extensive, probably due to its position amongst the dwellings of the poorer population. The surgeon there whose reputation stands the highest is M. Richet. He was, unfortunately for me, taking his summer holidays, and so I can tell you nothing of his practice. In the treatment of burns and scalds they have recourse here to a method somewhat novel. The injured limb is enveloped in cotton wadding, almost six inches in thickness, over this rollers are applied, and the limb allowed to remain undressed for several weeks. How this plan answers I cannot say, as my stay in Paris was not of sufficient length to allow me to see the results.

A thing which strikes one as a great defect in the Parisian system, is that too many patients are allotted to one medical man. You know how few patients a London surgeon sees, and how much care and attention is devoted to each one. The reverse holds good there. The visiting surgeons in some hospitals see almost a hundred patients a day. It is really hard to

understand how they can sufficiently study the clinical phenomena daily presented to their notice either for their own or for their students' instruction.

The Hôpital Boujeau is a very large one, in fact one of the largest here. At this institution the surgical patients, those with suppurating wounds, are treated out of doors, in tents. This plan seems an excellent one, and one which, I should think could easily be carried out at the Montreal General Hospital, during the summer months, when the house is full and the surgical practice at its height. Among the many cases in the wards of this hospital was one of double hip disease in a girl twenty years of age.

Through the kindness of M. Péan, of the Hôpital St. Louis, to whom I brought letters of introduction, I was enabled to witness one of his operations of ovariotomy. It was a private case, and the operation took place in one of the convents in the suburbs. The tumour was exceedingly large and consisted of one entire cyst. M. Péan operated with remarkable rapidity and coolness. As at all French operations, the "pinces hémostatiques" were used in large numbers to control the bleeding from the abdominal incision. These instruments are merely modified torsion forceps, and are applied to all the bleeding points in the exposed tissues. One frequently sees as many as twenty or thirty hanging on the edges of a wound at the same time. But to return to our tumour. The incision extended rather high up, about an inch above the umbilicus. The fluid was removed with a large aspirator capable of holding several gallons. There were no adhesions. The pedicle, which was long and narrow, was fixed in the abdominal incision by long pins, while hare-lip pins united the edges of the incision.

After having nearly died from the heat of a Parisian summer —I refer to myself, not the patient—I returned to London to find everybody out of town. Physicians, surgeons and accoucheurs had with one accord departed, leaving the assistants to do the work. There was then, and there is now, great talk about the Turco-Servian war. Mr. MacCormac, of St. Thomas', whose reputation as a military surgeon was

established in the Franco-German war, had already gone. He was soon followed by Mr. McKellar, one of the assistant surgeons, who brought with him some six or eight dressers selected from the students of the hospital. Since that time many have gone to the seat of war. There are three ways of going: with the Servians, where you run the chance of being hanged by the Turks; with the Turks, where you are likely to have the pleasure of seeing your English friends being put through that process; and with the National Society for Aid to the Sick and Wounded in War, where you may get shot by both parties. Altogether, the best thing to do is to stay at home.

The medical world has been in a state of excitement for some time about the celebrated Bravo poisoning case. I believe the dispute between Sir William Gull and Dr. Johnson is still *sub judice*, the profession being divided in opinion as to who was in the right.

The outcry about vivisection seems to have entirely subsided. The silly sentimentalists who were wont to revel in the horrors of imagined cruelty to the lower animals, have now, fortunately for science, a congenial employment in raising an equally absurd but more hurtful agitation about the greater atrocities perpetrated in Bulgaria.

R. L. McD.

Reviews and Notices of Books.

Chemistry, General, Medical and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia; a Manual on the General Principles of the Science and their Applications in Medicine and Pharmacy. By John Attfield, Ph. D., F.C.S., &c. Seventh edition. Revised from the sixth (English) edition by the author. Philadelphia: Henry C. Lea, 1876.

That the Manual before us has met with such support from the public as to require in so short a period the issuing of a seventh edition, is a subject on which the author may well be congratu-

lated, and it is but a just tribute to the care and attention with which he has carried out the task he has set himself, and an evidence of the success he has attained in the fulfilment of his intention of writing a handbook for students of chemistry as applied to medicine and pharmacy. The present volume is the seventh edition published in Philadelphia, and like the third and fifth editions contains the chemistry of the United States Pharmacopœia. It brings up our knowledge of the subject to the present date, and has been enriched with numerous wood engravings illustrative of apparatus and modes of work.

In the beginning of the book are some hints to students, which we commend to their earnest perusal.

There is also a very complete list of apparatus and re-agents required by the student with this handbook in hand. There is a list of contents in the beginning and a most copious index at the end of the book, making the work very complete as a book of reference not only to the student but also to the practitioner of medicine.

There is an excellent chapter on Chemical Philosophy.

The arrangement of the work is admirable, and to each element its more important compounds used in medicine or pharmacy is given, together with both synthetical and analytical reactions.

The systematic analysis of compounds, substances or fluids is also treated of, and copious tables are given showing the modes of systematically separating the different elements from one another.

To the student who has carefully studied the book and gone through the various operations therein given, and who has tested his work by answering the questions which are so liberally distributed throughout its pages, an ordinary examination in the professions to which this work is particularly addressed should present no difficulty.

There are, towards the end of the book, chapters on analysis both qualitative and quantitative, and also on toxicology and analysis of morbid urine, and urinary calculi; it also contains

copious tables of weights and measures, and of the solubility of salts, and a large and full table of officinal tests for impurities in preparations of the British Pharmacopœia, with a reference to the page where the test is more fully considered.

It is only necessary to see the name of the publisher to know that the paper, printing and general appearance of the book are all that can be desired. We cordially recommend the Manual to all students or practitioners of medicine or pharmacy—from it the former will obtain, by careful study, a thorough knowledge of the subject, and the latter will have at hand a never-failing book of reference.

A System of Midwifery, including the diseases of Pregnancy, and the Puerperal State. By William Leishman, M. D., Regius Professor of Midwifery in the University of Glasgow, &c., &c. Second American from the second and revised English Edition, with additions by John S. Parry, M. D., Obstetrician to the Philadelphia Hospital, &c., &c. 8vo. pp. xxiv. 766. Philadelphia: Henry C. Lea, 1875.

On a former occasion we noticed at some length the first edition of this excellent manual, so that it will be unnecessary to go fully into the consideration of this the Second American from the second revised English edition. Since the publication of Tyler Smith's lectures on Midwifery, no text-book which was in reality the exponent of British practice had appeared in the English language until Dr. Leishman supplied the want by his system of widwifery which was published about three years ago. The value of this work is fully attested by the exhaustion almost complete of both the English and American editions of the first issue. In this edition the American editor has added such notes as are deemed essential to the American Practitioner. He has also added a chapter on Diphtheria, and one on Puerperal wounds. There will be found also in addition some illustrations representing some modifications in obstetrical instruments employed by practitioners on this continent. The chief feature in this work is the exactness in description of the

mechanism of labour; it exhibits most accurate observation and is a perfect analysis of the subject; it is clear precise and masterly. The work is in every way a valuable addition to the works already before the profession on the science and practice of obstetrics, and will, we doubt not, be the favorable text-book used in our schools. It fairly represents the present state of knowledge on the subject of obstetrics, and may be fully trusted by the practitioner, as it contains all the information requisite, set forth in pleasing and judicious language. The style is particularly clear, and very readable, and the teaching sound.

A Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D., F.R.C.P., Professor of Obstetric Medicine in King's College, Physician to King's College, Hospital, &c., &c., with two plates and one hundred and sixty-six illustrations on wood. 8vo. pp. 576. Philadelphia: Henry C. Lea, 1876.

This work is also a valuable text-book, and we should say will become a favorite with the medical student. It will be found to embody all recent advances in the science, as well as the practice of obstetrics. The author in his preface states, that "On certain points he has recommended practice, which not long ago would have been considered hetorodox." This may be regarded as highly beneficial in a practical sense, as it shows that the author is not servilely bound by the opinions of those who have preceded him. He expresses his conviction that such changes in opinion on those points of difference will stand the test of experience. The author calls attention to the short term of three months in which the lecturer on Midwifery is expected to teach his art to his class. This is without doubt a mistake which will have to be remedied, and we fully concur in the opinion that the great importance attached to this branch of medical science in the present day will call for amendments in this respect in the regulations of the schools of Great Britain. In our own country the regulations are such that two full courses, each of

six months duration, are exacted to qualify a student to present himself for examination.

The work is in every respect a valuable addition to those already in the hands of the student of obstetrics, and we fully recommend it to our readers.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

The Inheritance of Syphilis.—The author recognises two ways in which syphilis may be inherited; in the first or congenital syphilis, properly so-called, the disease originates in a morbid state of the semen or ovum at the time of procreation. In the second, the syphilitic poison is communicated to the fœtus from the blood of the mother, this he calls "*Infectio intra uterum.*" In regard to the latter, his views are at variance with those usually accepted, for he contends that syphilis contracted by the mother *during pregnancy* cannot be transmitted to the fœtus in utero. Although nearly all authors agree in stating that syphilis contracted during pregnancy is only likely to be transmitted to the fœtus during the earlier months of that condition, a careful analysis of the literature of the subject shows that there is not a single well established case in which a child whose parents were both healthy at the time of conception, showed signs of hereditary syphilis at birth, no matter what the period of pregnancy may have been when the mother contracted primary syphilis.

According to Kassowitz, of 37 children whose mothers became infected during pregnancy, 16 died in the first month; 6 in the second and 3 in the third, but without showing any signs of syphilis; 7 lived and remained perfectly healthy. This immunity of the child notwithstanding the infection of the mother during pregnancy, is most strikingly illustrated by a case related in which a woman caught the disease from her husband in the second month of her second pregnancy, but gave birth to a

healthy child at full term. After subsequent conceptions, however, she was delivered of several still-born children, and lastly of one affected with hereditary syphilis.

On the other hand it cannot be denied that the outbreak of constitutional fever in the mother may occasion such constitutional disturbance as to cause the death of the fœtus, and abortion or miscarriage, without any infection of the latter.

The foregoing facts show that the syphilitic poison never extends through the vascular membranes which separate the circulation of the mother from that of the fœtus, in the direction of the latter.

The same law holds good in the opposite direction, that is to say, the syphilitic poison never passes through the walls of the uterine and placental blood vessels from the fœtus to the mother.

This is proved by the well known fact that syphilitic children are very frequently borne by women who themselves remain free from the disease. The author has observed 76 cases in which the existence of hereditary syphilis existed beyond all doubt, but in 43 of these the mother was free from taint ; and he says moreover, that a syphilitic father after having begotten several aborted or still-born children will beget healthy children after he alone has been through course of mercury. This could not occur if the mother, who has not undergone treatment, were also the subject of constitutional syphilis

A further proof is seen in the case of women who have borne syphilitic children to a first husband, but after his death, having married a healthy man produce henceforth a healthy offspring.

If the woman becomes syphilitic in the course of her pregnancy the infection is always of external origin, that is from the man. Sometimes the supposed tertiary syphilis which is said to occur in women without primary or secondary symptoms is not syphilis at all but merely a cachexia brought on by repeated abortions.

If we acknowledge the possibility of an "*Infectio intra uterum*," there only remains the one way in which syphilis can become inherited, and that is by contamination of the product of conception by some specific property in the reproduc-

tive elements derived from one or both parents when conception takes place, and at no other time. The liability to transmit syphilis to the offspring is not confined to the period during which syphilitic eruptions occur, for it exists as long as there is any syphilitic virus in the body, and according to the author, 10 years may be taken as the average number which elapse before a syphilized person who has not been treated will cease to transmit the disease to his or her offspring.

This conclusion is not influenced by the fact recognized by the author that parents suffering from well-marked tertiary syphilis do not beget syphilitic children, because these tertiary symptoms are merely a peculiarity engendered by the syphilitic poison now nearly entirely extinguished, in consequence of which peculiarity ordinary sources of irritation call forth an excessive production of cellular elements in the parts affected.

The mercurial treatment of syphilis has the effect of diminishing or even entirely extinguishing the liability mentioned, so that syphilis inherited from persons who have undergone a proper course of mercurial treatment will occur in a comparatively mild form if at all.

The law already laid down by other authors, that " the intensity of inheritance diminishes step by step with the spontaneous wearing out of syphilis in the parents," is entirely in accordance with the observations of Kassowitz. According to this law, syphilis inherited from recently syphilized parents is more virulent than when the latter have been infected for a long time, and manifests its severity in causing abortions and miscarriages. When syphilis was first contracted during married life, in almost every instance the healthy child immediately succeeding the infection (but conceived before the latter took place) was followed by several miscarriages. The author considers that the effect of the syphilitic poison upon the fœtus is the chief cause of interruption in the normal course of pregnancy ; the fœtus dies and causes premature contractions of the uterus. This series of events occurs early in proportion to the more or less recent infection of one or both parents.

Although a post-mortem examination of the still-born child

often reveals no palpable signs of syphilis, the author thinks that this may be explained by assuming that its death occurs at an early stage of its life, before secondary phenomena have had time to make their appearance, probably in consequence of altered nutrition, increased temperature, &c. Abortion caused by syphilization of the mother is less frequent, and may be due to the fever which ushers in the secondary symptoms, or, still more rarely, to disease of the maternal placenta.*

A considerable time always elapses before syphilized parents are capable of producing children that can live. In nearly all the cases observed by Kassowitz at least three years elapsed, and in more than half of them five years. Of 330 children born to syphilitic parents, seventy-three were still-born; twenty-four per cent. of those born alive succumbed to the inherited dyscrasia within the first six months, and only two-fifths of them survived the first half-year. When a living child is born whose parents are syphilitic, the visible signs of syphilis are present at or appear within a certain time after birth, and the more intense the infection, or, in other words, the nearer the period of conception is to the time when the parents contracted the disease, the earlier these signs make their appearance. A child born with syphilitic eruption is much less likely to live than when the eruption occurs some time after birth. The specific exanthem is almost always seen before the end of the third month, very rarely as late as four or four and a-half months after birth.

When the eruption occurs as late as three months after birth it is a sign that the syphilis has almost died out in the parents, and there is reason to hope that the next child may be free from taint.

It thus appears that there is a gradual diminution in the intensity of the syphilitic poison and in the severity with which it affects the product of conception, though no rule can be laid down in this respect when the parents have undergone a course of mercury.

* Kassowitz has examined a large number of placentæ where miscarriage has undoubtedly occurred in consequence of syphilis, and finds the fœtal portion either quite healthy or only diseased to a very slight extent.

An analysis of 330 syphilitic births, the offspring of 119 marriages, shows that the transmission of syphilis is constant, inasmuch as a healthy child was never produced in the interval between the births of any two that were highly syphilized.

That the father most commonly is the source of the syphilis is to be explained on social grounds. Other things being equal, there is no difference between the two sexes in the period of time after infection during which they produce syphilitic offspring.

Scrofula, phthisis, and rickets are sometimes met with in the children of parents who have been syphilitic, though the former may not have presented any signs of hereditary syphilis; but rickets is altogether the most frequent, and the author thinks that it is caused in all probability by some specific process previously affecting the bones. Nevertheless, rickets cannot be regarded as a distinct form of hereditary syphilis.

Electrolytic Treatment of Tumours.—Dr. Julius Althaus, of London, thinks that the limits of the usefulness of electrolysis in the treatment of tumours are now so thoroughly ascertained, that they will be neither notably enlarged nor diminished by future observations. The following is a short resumé of his latest conclusions as to the varieties of tumours in which electrolysis is useful.

1. *Nævus.*—Electrolysis possesses undoubted advantages over all the other methods of treating this variety of tumour. The ordinary round, flat nævus, which is elevated but little above the level of the skin, is often cured by a single electrolytic application; but the large port-wine spots often require half a dozen sittings. Dr. Althaus uses for the operation from 10 to 15 cells of Daniell's battery, both poles being introduced into the tumour. As soon as the circuit is closed the destruction of the nævus begins, the blood-vessels and skin seeming to wither up rapidly. The destruction takes place most actively in the neighbourhood of the positive pole. The current should not be too strong nor continued too long in any one spot, or it will leave a cicatrix.

After the operation, the surface should be covered with a gold-beater's skin, but no dressing is necessary, for there is no discharge and no pain. The scab falls off in ten to fourteen days, leaving a healthy surface that gradually assumes the appearance of the neighboring skin.

2. *Bronchocele.*—Electrolysis is less painful and less dangerous than the usual surgical treatment of the cystic form of goitre. Dr. Althaus introduces two or three needles connected with the negative pole of the battery into the cyst, the positive electrode being applied to the skin in the form of a moistened sponge. The current decomposes the fluid in the cyst, and converts the solution of chloride of sodium into a solution of caustic soda, which cauterizes the secreting membrane of the cyst, and prevents the production of more fluid. Two to six applications generally bring about a cure.

The hypertrophic bronchocele is much less amenable to treatment, and is generally let alone by surgeons. When, however it becomes dangerous by pressure on the important structures, electrolysis is indicated, and may be advantageously combined with injections of tincture of iodine. The latter breaks down the internal structure of the tumour, especially when it is old and firm, and so secures a freer passage for the electric current through the mass. In recent cases the injections may be omitted.

3. *Atheroma.*—Electrolysis removes this variety of tumour quickly, and without risk, and leaves no cicatrix. The action is more rapid when both poles are introduced into the tumour, than when the negative alone is used.

4. *Recurring Fibroid.*—As the knife fails to cure this variety of tumour, Dr. Althaus thinks that electrolysis should receive a fair trial. The results he has obtained with it so far have not been particularly encouraging, probably because in all his cases the tumours had obtained enormous size, and had existed a long time. In one desperate case, on which Sir James Paget, Sir William Fergusson, and Mr. Cæsar Hawkins had refused to operate, electrolysis relieved the intense pain, and caused a diminution of the size and hardness of the tumour; but the

treatment could not be followed out for a sufficient length of time to give positive results, as the patient was unable to remain in London.

5. *Cancer.*—Although electrolysis cannot replace the knife in the treatment of primary carcinoma, it often produces excellent results in epithelioma and recurrent cancer. It cannot remove the cancerous diathesis, but it relieves the pain, enables the patient to sleep, improves the appetite, and strengthens and quiets the entire system, and so renders the last months of life more bearable.—*Berliner klin. Wochenschrift.—N. Y. Medical Record.*

Cure of Tetanus by mechanical measures.—CALASTRIE. (*Gazaetta Medic*, Lombardia, No. 27.)

A patient, who was convalescent after various attacks of hæmorrhage from the skin and mucous membranes, was wounded in the sole of the right foot and had partial tetanus result. There was considerable rigidity of the muscles of the cervical region and those presiding over the movements of the jaw. Sulphate of quinia and chloral were followed by temporary relief only. Then C. thinking that the difficulty of injecting sufficient nutriment was due to the localization of the tetanic affections in the muscles named above, concluded to overcome the rigidity by forced movements of flexion, extension and rotation. This was continued till voluntary movement became possible. The jaws were then separated little by little from day to day, until they could be more widely opened, and the patient could himself take solid food. This treatment was continued during the month of August, and by autumn the cure was completed.—*Chicago Medical Journal and Examiner.*

Treatment of Acute Albuminuria.—(By F. DE HAVILLAND HALL, M.D.)—Directly any albumen was detected in the urine, the patient was ordered the perchloride of iron, and was allowed no solid food except a little bread and milk, and as much water as he liked to drink; this treatment, together with keeping the skin gently acting, sufficed in

the majority of cases, but in a certain number the urine was almost suppressed, and in some there were uræmic symptoms. Whenever either of these contingencies occurred I forbade all food for twelve hours, the child to have nothing but water and a drink made of acid tartrate of potash (℥j. ad Oj.) in sweetened water with a little lemon-juice. If at the end of this time the kidneys were beginning to act I allowed a little milk, but not more than a pint in the twenty-four hours; if, however, the uræmia continued with little or no urinary secretion, I persevered with the water and bitartrate of potash, and in severe cases nothing else has been given for thirty-six hours. Dry cupping, mustard poultices over the loins, and a purgative were the only additional remedies employed. The explanation of the good effects of abstention from solid food, and especially meat, during the course of acute desquamative nephritis, is that if a patient is entirely deprived of nitrogenous food the work of the kidneys is lessened and the urine is rendered less irritating, and the mild diuretic action of the bitartrate of potash seems to be useful.

If any one will take the trouble to compare the treatment of acute Bright's disease as laid down in the various text-books on the subject, he will be much puzzled as to what course he had better pursue, for "when doctors disagree who shall decide?" and it cannot be said in this instance "that in the multitude of counsellors there is safety." The great point of dispute is as to the employment of diuretics. Dr. Johnson, who is the great opponent of this plan of treatment, gives as his reasons that there is "first a morbid condition of the blood, which has excited disease in the kidneys, and that as a secondary consequence of the renal disease the blood has become contaminated by the retention in it of urea and other excrementitious matter," and he therefore advises that the kidneys should have as little work to do as possible, and that the other excretory organs should be called upon to asssist in carrying off the waste products to the utmost of their power.

His treatment consists of—1. Warmth in bed. 2. Diet. "The food should be scanty, consisting of gruel, arrowroot, milk, or weak broth." 3. The use of the warm water or hot air bath, and

antimonials to cause diaphoresis. 4. The bowels to be kept freely open. "The circumstances which indicate the necessity of additional remedies are a very scanty secretion of highly albuminous and bloody urine, with, occasionally, severe pain in the back, more or less pain in the head, some degree of drowsiness or delirium, at length, perhaps convulsions or coma, or an alternation of these two formidable symptoms." For these he recommends cupping on the loins. As regards diuretics, he says: "I mention the subject only for the purpose of deprecating their employment."

Dr. W. Roberts, on the contrary, writes:—"Objections have been made, on theoretical grounds, to the saline diuretics (acetate and citrate of potash) in acute Bright's disease. Experience has proved, however, that they may be employed with great advantage. They become changed in the primæ viæ into alkaline carbonates, and these diminish the acidity of the urine and render it more bland, as it percolates the renal substance.——In a considerable number of cases of acute Bright's disease, coming under treatment early, I have obtained almost invariably the best results by the free administration of the citrate of potash." His treatment is as follows:—"An endeavour should also be made to allay the fever and restore the action of the skin, by a citrate of potash draught, given every two hours, in effervescence, or a mixture of the liq. ammon. acet. in two or three drachm doses, with fifteen drops of the tincture of henbane in an ounce of inf. lini. The diet should be composed of light farinaceous substances, with milk, beef-tea, and broths. Flesh meat in any form is objectionable in the early stages."

Dr. Dickinson bases his method on the necessity there is for an abundant flow of fluid through the kidneys to wash out the extravagant growth of epithelial cells and prevent them blocking up the tubes. "Hydragogue purgatives and vapor-baths, while tending comparatively little to remove the elements especially belonging to the urine, divert the water which is wanted for this purpose. Of all diuretics water is the most valuable. The patient may be restricted to a fluid, but nutritious diet,

while pure water is taken freely. In children, when the kidney responds readily to this simple stimulant, the disease will generally recover without further treatment. In grown persons, or in children when the disease is severe, digitalis is a most valuable adjunct." He strongly condemns the employment of hard purging and sweating, and he would reserve the repeated use of hydragogue purgatives for obstinate and hopeless cases only. Dr. West thus criticises Dr. Dickinson's treatment by the administration of a large quantity of water :—" Nothing whatever that was observed during its use among my patients at the Children's Hospital seems to justify one's regarding the drinking of two or three pints of cold water in the twenty-four hours as more than a useful adjunct to the treatment."

From what I have seen of this disease I am inclined to agree with Dr. Dickinson rather than Dr. West, but I cannot too strongly enforce the opinion of the latter as to the inutility of cathartics in the treatment of acute albuminuria, there is the risk of checking perspiration and thus throwing additional work on the kidneys, and sometimes obstinate diarrhœa is set up.

The authorities to whom reference has been made are sufficient, I think, to show the difference of opinion in reference to the use of diuretics in the treatment of acute Bright's disease, for while all are agreed that the more powerful and irritating drugs of this class should not be employed, some advise the use of the milder diuretics, whereas others say most emphatically " Diuretics are not to be given." The diuretics which are usually recommended as the least irritating are the sweet spirits of nitre, cream of tartar, and infusion of digitalis ; if the stomach rejects the digitalis, an infusion four times the strength of the pharmacopœial one may be applied to the abdomen as a fomentation.

Dr. Southey attributes the success of the employment of the tartrate of potash in Bright's disease to the " abundant diuresis of alkaline urine ;" and goes on to say, " I am speculative enough myself to imagine that an alkaline fluid, passing through the urine tubes, has some similar action to that of weak soda or potash solutions upon sections of dead kidney-tissue under the

microscope. I mean, that fat granules are saponified, cells rendered more translucent, the interstitial tissues become more loose, and the circulation is thus facilitated." It was some such idea as this which first induced me to try the plan of treatment I advocate, and the success attending it has induced me to call the attention of the profession to it, in the hope that a more rational plan of procedure may be adopted than the hard purging and sweating which is still too much in vogue. As a general rule, far too little attention is paid by the medical attendant to the diet of the patient, that is to say, the directions given are vague in the extreme, but in acute albuminuria, as in typhoid fever, any indiscretion in the food may be visited with the most severe punishment,—an attack of convulsions may be caused by excess in the first, just as I have seen perforation result from taking solid food too early in typhoid fever. I would sum up the treatment in acute Bright's disease in the following words :—

1. Milk and water with arrowroot, no solid food. 2. Mild diuretics, such as the citrate or bitartrate of potash with a free supply of water. 3. The skin kept just moist. 4. A daily evacuation of the bowels.—*The Practitioner.*

Death from Hæmorrhage into the Bladder.—A curious case recently occurred in the practice of Mr. H. O. Thomas, of Liverpool. An octogenarian consulted him concerning some urinary obstruction, and was advised to go to bed where he would be seen by an assistant. The assistant was despatched, armed with catheters, and passed a No. 12 without difficulty, but was astounded at finding that instead of urine a free flow of blood occurred. The blood was mixed with urine, and a quart was withdrawn, which immediately coagulated. All his veins were very much enlarged, and gorged with blood. He was conscious, but very irritable and unmanageable, and complained of great pain. In the evening, an india-rubber catheter was passed, and a pint of blood was drawn—no urine. The next day feverish symptoms set in, pulse 120. Temperature 103.4.° A catheter was again passed with a like result.

Patient was becoming unconscious and swollen, and after passing the catheter again with the customary result, he died the next day. The only probable theory as to the cause of death is that a rupture of a small vesical vessel occurred which filled the bladder with blood, preventing the entrance of urine, and finally caused uræmia and death.—*Students' Journal.*

Injecting the Male Bladder without the aid of a Catheter.—For the last year Prof. McGuire, of Virginia, has made use of the following simple procedure in injecting the male bladder. He takes the ordinary rubber-bag syringe used to inject the bladder through a catheter, the nozzle of which is provided with a stop-cock, and tapers to a point. The bag is filled with warm water, all the air being carefully excluded, and the nozzle oiled and introduced into the urethra for an inch and a half. The urethra is then gently compressed around the nozzle of the syringe, the stop-cock turned, and by a gentle and continuous pressure on the bag, the water forced along the urethra into the cavity of the bladder. It is important to avoid all rough manipulations, and to inject the fluid slowly. With a little practice the patient can perform the operation quite readily himself. This method of injecting the bladder is especially applicable to those not rare cases in which the introduction of a catheter causes pain or urethral fever. The warm water may be medicated, but it is important to remember that the mucous membrane of the bladder is more sensitive than that of the urethra, and consequently these injections must be milder than simple urethral injections would need to be.

Prof. McGuire has employed this method with advantage in a case of malignant vascular tumour of the bladder, and preparatory to the operations of lithotrity and lithotomy. In a case of severe cystitis following the first of a course of lithotrity sittings, distending the bladder with water by means of a bag syringe was followed by such immediate and great relief that he was able in a few days safely to employ the lithotrite again. In a case of severe strangury, the same proceeding gave almost complete

and immediate relief. It is, however, in cases of cystitis and enlarged prostate that Prof. McGuire anticipates most benefit from this method of injecting the bladder. In these cases, the introduction of the catheter, and its necessary retention in the bladder for some minutes, often cause urethral fever and increased irritability of the bladder that more than counterbalance the good the injection may have done. The frequent introduction of the catheter, moreover, in the case of chronic hypertrophy of the prostate, undoubtedly has a tendency to increase the already existing trouble. In these cases the bag syringe can, with few exceptions, be substituted for the catheter. Four or five ounces of warm water, simple or medicated, are to be injected and retained for a few moments and then expelled. What will remain in the bladder will be, not the phosphatic, irritating urine that was there before the operation, but a small portion of this diluted with water. By repeating the injection the residual fluid can be made entirely unirritating.—*Virginia Med. Monthly.*—*N. Y. Medical Record.*

On the coincidence of Pulmonary Phthisis with Valvular affections of the Heart.—By Ernst Frommolt.—Rokitansky was the first to maintain that certain affections, and notably chronic endocardial diseases were antagonistic to pulmonary phthisis. Already some authors, such as Frederich, Von Dusch and others, have pointed out, but without giving the facts in support, that this assertion is subject to exceptions.

The author has examined 277 cases of heart disease and found most unmistakable pulmonary phthisis in 22 instances. Contrary to the assertion of Lebert, according to whom, affections of the pulmonary valves furnish the majority of the cases of phthisis, the valves the right heart were affected in but one single case: all the others were affections of the left heart.

The conclusions of the author are embodied in the following propositions:

1st. The coincidence of pulmonary phthisis with valvular

affections of the heart is far from being as infrequent as is generally supposed.

2nd. Pulmonary phthisis is rather more frequently associated with affections of the aortic orifice than with those of the auriculo-ventricular opening of the same side. The difference, however, is but slight.

3rd. Simultaneous affections of several of the cardiac orifices is very seldom found together with pulmonary phthisis. Still, stenosis of the pulmonary orifice existing with other valvular lesions seem to form an exception to this rule.—(*Revue des Sciences Médicales*, 15 January, 1876.)

Poisonous condition of the blood of some slaughtered animals.—It has been established by Signol, after prolonged investigation, that the blood of healthy horses which have been either slaughtered or smothered by means of charcoal fumes, left in the cadaver for at least 16 hours, acquires fatal properties if it is injected to the extent of eighty drops into goats or sheep. This blood contains only bacteria, which do not multiply in the animals injected. The blood of the deep veins, situated in the neighborhood of the intestines, becomes more rapidly poisonous than that of the more superficial veins. The blood of animals which have been strangled and not submitted to the carbon fumes, contains bacteria, and the corpuscles are agglutinated together, the circumstances which are looked upon as characteristic of charbon.

At the end of from 6 to 9 hours the blood is not fatal, but already produces abscesses.

The blood of an asphyxiated horse becomes toxic more rapidly than that of one which has been slaughtered.

Blood taken from an animal inoculated and then sick from the effects, does not seem capable of producing the disease; on the contrary, blood taken after its death seemed in most cases to transmit it perfectly.—(*Revue des Sciences Médicales*, 15th April, 1876.).

Glycæmia.—Glycæmia is the result of a physiological function, it has its source in the organism and not in the food.

A communication by M. Cl. Bernard to the Academy of Sciences comprises the following points:

1st. Glycæmia does not differ in carnivorous and herbivorous animals; it is independent of the kind of food. This law is established by numerous experiments which lead the author to the following conclusions:

"Whatever be the nature of the food, in herbivorous as well as in carnivorous animals, during digestion, during abstinence and even during fever, the blood always exhibits almost the same proportions of sugar. These facts seem to me sufficiently distinct to refute the theories which have placed the source of the sugar of the blood in the food, and sufficiently clear to demonstrate that there exists on the contrary, in the living organism, a glycogenic function which maintains and regulates the quantity of the sugar in the blood and renders it independent of the variable conditions of digestion."

M. Bernard then explains the objections which can be made to the different processes, and he passes in review the physiological conditions which can cause the quantity of sugar contained in the blood to vary. Apart from these changes, the proportion of sugar is always sensibly the same.

The comparative conditions in this respect of the blood taken at different parts are the following:

1st. Throughout the arterial system, the blood exhibits a proportion of sugar sensibly identical.

2nd. In the general venous system, the proportion of sugar is variable, but always less than that in arterial blood. Finally, one can conclude that, normally, the venous blood of the limbs, trunk, head and neck, contain less sugar than corresponding arterial blood; so that the saccharine matter is destroyed in all hese organs in proportions undoubtedly variable, but sufficiently difficult to determine.—*Gazette Hebdomadaire*, 18th August, 1876.

Malformation of the Small Intestine.—M. Polaillon communicates to the Chirurgical Society of Paris an observation on malformation of the small intestine, with operation for artificial anus by the method of Littré. Five hours after birth the infant vomits meconium, although the anus was permeable and normal. The day after birth the belly was distended; vomiting. An enema produced a discharge of only a small quantity of mucus. The third day the infant has sunken eyes; there are established all the signs of intestinal obstruction. A flexible bougie, introduced by the anus, penetrates 10 centimetres. Fæcal vomiting. M. Polaillon seeing that he had to do with obstruction of the gut, performed the operation for artificial anus by the method of Littré. The knuckle of the intestine is fixed to the wound and cut. Escape of intestinal matter; the infant seems to be relieved; he dies during the day. The small intestine was interrupted about its middle by a complete membrane; between the stomach and this membrane the intestine measures 86 centimetres; between the obstruction and the cæcum, 64 centimetres. Malformations of the small intestine are rare at this point; ordinarily they are found in the region of the duodenum. This observation demonstrates that meconium exists in the upper part of the small intestine, and probably comes from the liver.—*Gazette Hedomadaire,* 18th Aug., 1876.

Treatment of Certain forms of Acne.—Dr. Chantry claims that he has obtained gratifying success in the treatment of rebellious cases of acne of the tuberculous and hypertrophic variety, by the use of iodide of sulphur internally in combination with Hardy's lotion externally. He gives at first one, then two or three of the following pills: ℞. Sulphur. iodid., gr. ss.; Extr. solani dulcamaræ, gr. ij. M. He employs also the following lotion: ℞. Aquæ, ℥ iijss.; Tr. benzoin, ℥ i. Potass. sulphuret. M. A teaspoonful in lukewarm water, to be used morning and evening. (Hardy). If this lotion causes too much irritation, it must be replaced by lotions of filtered bran-water. In some cases the iodide of sulphur causes gastralgia,

and its use must be discontinued; but if this does not occur, a noticeable amelioration of the affection is found in about twelve or twenty days. The hard, purple elevations which surround the tubercles slowly soften and become less swollen, the usual desquamation of the epidermis takes place, and soon nothing remains but a diffuse, pale congestion, which disappears slowly, and is often succeeded by triangular cicatrices.

In a case of acne rosacea of the face, of nine months duration, which had resisted several methods of treatment, the iodide of sulphur could not be borne, and iodide of potassium was given instead, in doses rapidly increasing to a drachm a day. At the same time the diseased parts were rubbed briskly every evening with sulphur pomade (15 sulphur to 30 lard). In fifteen days the cure was almost complete, and two months later there had been no return of the disease.—*Lyon Médical.—N.Y. Medical Record.*

The Etiology of Herpes Zoster.—Barensprung, as is well known, was the first to express clearly the connection between the course of the nerves and their affection, and to place it on a proper anatomical basis. He had, in 1861, from an analysis of 50 cases, established theoretically a corresponding affection of the intervertebral ganglia in herpes on the course of the spinal nerves, and of the Gasserian ganglion in zoster on the territory of the trigeminus. Two years later this view was confirmed by finding inflammation of the spinal ganglia and commencement of the dorsal nerves in an individual who had died of phthisis and with zoster dorso-pictor. Since this time three cases have been published with post-mortem reports, in all of which there was found an inflammatory condition of the spinal ganglia and roots of the affected nerves.

Kaposi publishes (*Wien. Med. Jahrbb.*) the clinical history and post-mortem appearances in a case of *zoster lumbo-inguinalis* with disease of the spinal ganglia, which is all the more remarkable, as there was not, as in the other cases, any local complication.

The patient, a man 54 years of age, suffering from stricture, and false passage, died on the 9th day after the appearance of the zoster, which affected the right lumbo-inguinal region, of pyæmia, in consequence of purulent infiltration of the scrotum and penis. There was found moderate hyperæmia of the spinal cord and its membranes in the lumbar region; vertebræ, dorsal and lumbar, unaffected, so also the soft parts in the region of the pelvis, the vessels, and the intervertebral ganglia of the left side. The ganglia of the right side were notably enlarged, denser, and with difficulty removed from the closely adherent adipose tissue. The microscopic examination showed the pathological changes to be most intense in the second and third lumbar ganglia, evident also in the last dorsal and first lumbar and only just perceptible in the fourth and fifth lumbar ganglia. These changes consisted in an evident hyperæmia and extravasation in the peri and intra-gangliar fat tissue, less in the connective tissue, also exudation and hæmorrhage in the ganglion capsules and cells, causing a retraction of the latter from the former and finally in a paleness and degeneration of the protoplasmic bodies of the ganglion cells.—*Schmidt's Jahrbücher*, 27 July.

Inflammation of the Breast in Young Men.—This affection, though not very rare and easily treated in the majority of cases, sometimes is most difficult to treat successfully; in books on surgery it is but slightly noticed. Mastitis is most frequently the result of a blow, but still many cases come under observation in which it arises from no known cause. It often occurs in healthy youths about the time of puberty, and is accompanied by most severe pain, slight fever, and swelling of the glands of the axilla; the breast is very tender to the touch, and feels hard and knobby. Mastitis generally ends in resolution, hardening or suppuration, and frequently recurs in the same individual. The treatment is simple. If the patient cannot bear cold applications, warm fomentations may be frequently applied. After the pain and inflammation has somewhat subsided, apply a mercurial plaster over the breast and give iron and quinine internally.—*Wentsche Zeitscher (Chir.), quoted in Schmidt's Jahrbücher.*

Treatment of Umbilical Hernia in Infants.—Dr. Giuseppe Rapa says he has, for the last twenty years, been in the habit of treating umbilical hernia of children in the following way:—After the child has been washed, the mother holds it in her lap with the shoulders to the left side and pelvis on her right knee; with her left hand she fixes the upper extremities of the child, and with the right the lower. The surgeon should then paint the hernia and its neighborhood with collodion. The hernia is then reduced, and a compress dipped in collodion applied over it and held in its place for about three minutes by an assistant. The compress should be held in its place by long strips of adhesive plaster, which should meet at the spinal column, and over this a broad roller is applied and the whole surface of the roller painted with collodion.—*Revue Clinicale, 2nd Series, quoted in Schmidt's Jahrbücher*, 1876.

The inutility of Cutting the Frænum in new-born infants, by Dr. Bailly:—The author thinks that division of the *frænum linguæ* is perfectly useless in new-born children, and can even become dangerous in cases in which the deep parts are divided, which contain important vessels. According to M. Bailly the frænum has no effect on suction and on articulation of words. Relative to suction it is to be remarked that very often a very decided frænum is only recognized at the end of several days during which the child has not failed to suck quite regularly. Sometimes, even, it is only at the end of several months that chance discovers this condition in children otherwise thriving,—proof, that as far as sucking was concerned there was no inconvenience. It is scarcely supposable otherwise, considering its extensive frequency, that the frænum does escape notice in plenty of children in country districts where the doctrine which concerns it has not penetrated, and where, were it recognized, no one would probably be found capable of performing the operation; a condition which does not prevent infants from nourishing themselves and thriving like others.

M. Bailly inclines to believe the reproach is no better founded

as to its effect on the articulation of words. Although having less complete evidence in regard to this, he cites the case of a woman of twenty-six years who has no defect of pronunciation, and whose tongue cannot pass beyond the line of the teeth.—*Bulletin de Therapeutique*, 15th July, 1876.

Hyoscyamine.—Dr. Petois relates two cases of uncontrollable vomiting in pregnancy, which were cured completely by hyoscyamia after all the usual remedies failed. He gave a teaspoonful hourly of a mixture containing five milligrammes of hyoscyamia in 125 grammes of water.—*L'Union Medicale, Sept.*, 1875. (*Edinburgh Medical Journal.*)

Bicarbonate of Soda in Toothache.—Dr. Dyce Duckworth records a case of severe toothache, which was almost immediately cured by the application of a solution containing about half a drachm of bicarbonate of soda in an ounce of water, after other remedies as chloroform, etc., had failed.—*Practitioner, April*, 1875.

Hyposulphite of Soda in the Treatment of Boils.—Dr. S. Duncan Bulkeley states that hyposulphite of soda, in doses of thirty grains three or four times a day, largely diluted, and on an empty stomach, is the treat ment mainly adopted by him for preventing the formation of boils. Should this fail, he gives large doses of quinine.—*American Practitioner, May*, 1876.

Nitrate of Soda in Dysentery.—Dr. Caspari gives large doses of nitrate of soda in acute dysentery, and finds that it is as effectual in rectal as in the intestinal forms of the disease. He gives from three to six drachms in divided doses in twenty-four hours. The solution should be warm.—*Bull. Gén. de Thér.* (*Edinburgh Medical Journal.*)

CANADA

Medical and Surgical Journal.

MONTREAL, NOVEMBER, 1876.

THE HEREDITY OF SYPHILIS.

Every one who has carefully studied the discussion on syphilis in the Pathological Society of London last spring will be struck by the divergence of opinions expressed by men who have justly earned the right to speak with authority on the subject. Indeed the only safe conclusion that can be drawn after weighing the dicta of so many profound thinkers is that the whole subject still remains to be worked over both by the clinicist and pathologist before any syphilogical doctrine hitherto advanced can be accepted as complete and satisfactory. The investigation of clinical facts concerning syphilis is, perhaps, attended with greater and more numerous obstacles than are met with in the case of any other disease.

The frequent tendency of syphilitic patients to distort or conceal the truth from feelings of shame, distrust or otherwise, the inexpediency of pushing inquiries to such an extent as will excite awkward suspicions on the minds of the patient's friends or relations, the long duration of the affection, and lastly its liability to become modified by individual peculiarities of constitution or in consequence of treatment, presents an array of difficulties which might well appal the stoutest-hearted searcher after truth. For the pathologist the whole story of acquired secondary syphilis, at least, is almost a closed book. This fact, though, perhaps a fortunate one, is a serious impediment in the way of ascertaining the exact connection between secondary and tertiary syphilis.

With so wide a field for research, and so important a subject

let us hope that the laborers will not be few, nor their harvest of fresh facts a scanty one. The question of heredity is one of the most important in connection with syphilis, and yet it is one of the least settled, probably because syphilographers are as a rule not favourably situated with regard to their patients, for the purpose of making sufficiently protracted observations. In this respect the general practitioner could avail himself of his better opportunities of watching the results of syphilitic marriages, and by keeping an accurate record of the same materially aid in the settlement of such problems as the following, and many others of equal practical importance :

Can a woman bear a syphilitic infant without becoming infected herself ?

What length of time must elapse before a syphilized man can marry without danger of transmitting syphilis to his offspring ? Is congenital syphilis capable of being transmitted to the third generation ? Does syphilis ever cause scrofula or tuberculosis ?

In the selected matter of this month will be noticed an article translated from the " Centralblatt," on the inheritance of syphilis, by a German writer of some note, Dr. Kassowitz, and although many of his statements are open to criticism, the article in question will repay perusal.

According to this writer a woman may contract syphilis during pregnancy, and suffer from the usual constitutional symptoms, and still give birth at term to a perfectly healthy child. This, if true, is a most remarkable fact, but we are inclined to think the element of time has probably been neglected in the investigation of this point,—that the immunity of the infant under such circumstances, is apparent though not real, for if the law of Colles, enunciated in the year 1837, be accepted, that syphilitic infants nursed at the breast often infect the breast of the wet nurse, but never that of their own mother, the conclusion is irresistible that the mother has also been syphilized, although she may not have shown any secondary symptoms, or as Mr. Jonathan Hutchinson expresses it : " Syphilis thus acquired by blood contagion from the fœtus would appear to be for the mother, parallel with vaccination with regard to small-pox, she gains immunity without suffering from any severe form of the disease."

But let us suppose the order to be reversed, and the mother's blood becomes contaminated with syphilis whilst she is carrying a healthy fœtus in the womb, there is surely no reason why the fœtus should not pass through a similar process and gain protection in the same way; if so one of two things would be necessary before a child born under these circumstances could be pronounced free from syphilis. It would be necessary to test the fact by inoculation, or to await the advent of some of the later signs of inherited syphilis, such as interstitial keratitis, which it is now well-known may sometimes be delayed until middle life. It is not, however, our intention to discuss all the questions raised in the paper alluded to, inasmuch as it is fresh clinical facts that are wanting for their solution, and without these we cannot hope to advance our knowledge of this important subject beyond its present uncertain boundaries.

OUR CIVIC SMALL-POX HOSPITAL.

We should like to ask the Chairman of the Health Committee one or two pertinent questions. For what purpose has the Civic Small-pox Hospital been constructed. Is it intended simply as a place to which to remove all the unfortunates afflicted with the dread disease, leaving them to the strength of their constitution to determine whether they shall live or die? Or is it really meant to be what its name implies—a Hospital—that is to say, a properly governed institution for the medical care, and if possible the cure of those admitted to its wards? If the former, we have nothing more to say. If the latter, we must be permitted to observe that we fear, that, as at present conducted, it fails to fulfil its object.

It is but recently that we have made ourselves acquainted with the actual mode of furnishing medical attendance to the patients at the Small-pox Hospital. It will be remembered by many of our readers that some months ago one of our two health-officers was permitted by the Board to omit all attendance at these Hospitals, on the ground that it interfered with his private practice. Since that time we have always been under the im-

pression that the other official Dr. Larocque, was in regular attendance there. We now, however, learn to our surprise that no regular visits of a medical officer are made at all. He goes only when sent for by the matron, in the meantime the patients take care of themselves. A medical friend of ours recently sent a patient there, and nearly a fortnight afterwards was puzzled at getting a message requesting him to come to the hospital and say if he were well enough to go out. On going he was told by the patient that he had seen the medical officer but once since his admission. Now we contend that this is essentially wrong, and is a great injustice to those who go and to those who send patients there for treatment (?). Can it be wondered at, that people refuse to go if this is the way they are to be treated ?

The excuse given for this is that the matron can always judge when any one is sick enough to require medical aid ! Can we believe that, if the public knew the facts they would consent to allow the bestowal or not of medical attendance upon their friends to depend upon the discretion of the female superintendent ?

We cannot for one moment admit that the duties of a medical attendant of such an establishment are fulfilled by his simply making a hurried visit when particularly asked to do so by the matron. We desire rather to see it a portion of his regular duties regularly performed, to exercise a constant and intelligent supervision over the entire hygienic, dietetic and medicinal regime of the Institution. He should most unquestionably be obliged to acquaint himself daily with the condition of all the patients, and to see that all their requirements are punctually attended to in accordance with his directions.

This is what is expected from the attending physicians of the General Hospital (who attend gratuitously) and why should not the same be demanded here ? When the Montreal General Hospital had charge of the small-pox patients, the Governors paid a physician a fair sum for attending upon them, but insisted upon his visiting *twice daily* through the entire wards. How thoroughly this duty was then performed, all connected with the Hospital very well know.

Whilst on this subject we would further remark that this public Institution in which it is of the most vital importance to retain the public confidence, is entirely without any of those salutary checks (periodical inspections and reports) which obtain in the case of most other public establishments. It might not be amiss to take into consideration what would be the best means for carrying out some such inspection and periodical report to the public on the subject.

We do not desire to criticize more than we can help, but there is one other point which we would like to mention. The matron is permitted to compound and dispense all the drugs and medicines required in the house. This lady, whatever her qualifications may be (and we are ready to admit them), in regard to energy and capability for governing and managing the general affairs of the house, has certainly had no medical education whatever, and knows nothing of the nature and properties of medicines. It is not right that responsible work of this kind should be performed by one possessing no qualifications for it. Either the medical officer in charge should do the work himself or have some other competent person to do it for him.

We hope that Alderman McCord will see his way to make some changes in the directions we have indicated, for we are sure that upon proper consideration, they will be found to be most just and reasonable.

THE NEW CORPORATION BY-LAW.

We observe that a by-law is proposed by the City Corporation, whereby a fine of forty dollars or two months' imprisonment is to be imposed on all practitioners of Medicine of the City of Montreal for the neglect to report to the Health Committee, within twelve hours of its occurrence, every case of infectious disease. We cannot think that the by-law will be permitted to pass in its present shape, as it will, in our opinion, lead to endless litigation. What is meant by infectious disease ? If it is limited to small-pox and typhus fever, let us understand it to be so, but even so, we hold that it is no part of a physician's duty to report to the Health Committee any of the private concerns of his patients. We fear if this by-law is passed that it will not

work, as we should suppose that the majority of physicians would resist its enforcement. What are we coming to, with two health officers, and a health committee, yet are we without a head that can give counsel to the citizens on health matters.

Quite recently a young man was taken with small-pox in a boarding-house in Bleury street. His physician at once procured a private room in the Civic Small-pox Hospital, and had him removed thither in that vile and hideous vehicle provided for the purpose and called the city small-pox van. Five days after the removal of this gentleman a couple of sanitary officers went to the house, put up posters with the words small-pox in French and English and threatened the mistress of the establishment with fine and other penalties if she dared to remove the notices. Now this appears to be wrong. The city officials should not be instructed to resort to such measures. There was no small-pox in the house, nor was it likely that there would be, every precaution had been taken. The room had been cleansed and disinfected, the bedclothes and furniture removed, and it was a gross injury to the proprietor of the house as well as the whole neighborhood, as it was calculated to create unnecessary alarm.

We certainly think that if persons determine not to remove their friends to a proper place provided for them by the city, then would the authorities be perfectly justified in notifying the neighborhood that small-pox was certainly in that house; but to placard a house with posters intimating that small-pox was in that house, when it was not so, is, to say the least, calculated to do damage to individuals, a damage which could, we should suppose, be remedied by an action at law. If this rule is to be carried out in all instances, we should say that there would be a goodly lot of houses disfigured with posters bearing the words *picotte, small-pox.*

THE PHYSICIAN'S VISITING LIST FOR 1877;

LINDSAY & BLAKISTON, PHILADELPHIA.

We have received a copy of this most useful little book, and as we deem it indispensable to the Physician in active practice, we hasten to notice it. It is in the same style as its predecessors, this being the twenty-sixth year of its publication. The contents are an almanac, table of signs, Marshall Hall's ready

method of treating asphyxia. A list of poisons and their antidotes, and a most useful table for calculating the period of gestation.

Then follow blank leaves for visiting list, for every day in the year. Monthly memoranda, addresses of patients and others, nurse's addresses, accounts asked for, memoranda of wants, obstetric engagements, vaccination engagements, a few sheets for record of births, also for record of deaths, and general memoranda. Messrs. Lindsay & Blakiston, in their announcement state the list can be had to contain a record of from 25 to 100 patients weekly. They publish also an interleaved edition which will be found of great service to the busy practitioner, as in it he can keep short notes of cases, to be transferred or written out at greater length in his proper note-book. It is an exceedingly handy little book, can be carried in the pocket. It has attached a pocket and pencil. The price is very moderate, ranging from one dollar, the price charged for a book intended for 25 patients weekly, up to three dollars for two volumes for 50 or 100 patients per week. It is to be procured by ordering direct or through Dawson Bros., St. James St.

WILLIAM R. WARNER & CO.

We are pleased to observe that William R. Warner & Co., manufacturing chemists of Philadelphia, have received the Centennial Medal for the superiority of their Soluble Sugar-coated Pills. We can testify to the elegance of these preparations, as well as to their reliability. We believe that this is the third occasion on which the excellence of these preparations has been testified to by awards of medals at the World's fairs. Messrs. Kerry, Watson & Co., are the agents at Montreal.

Dr. Stark writes to correct a mistake which occurred in the October Number of this Journal in the formula which he gives for the treatment of Gonorrhœa.

The formula should be as follows:

℞. Ol. Erigeron. Canad. ℥ij; Ol. Lig. Santal. ℥iss; Spt. Vini Rect. ℥iss; Syr. Simpl. ad ℥iij. M.

Flavour with essence of wintergreen. Shake before using. A teaspoonful every three or four hours.

It will be seen that the amount of Ol. Santal. Lig. is much diminished in the formula, being ℥iss instead of ℥iss, and the quantity of spirit is increased, being ℥iss instead of ℥i.

He also sends the particulars of two other cases, being Nos. 6 and 7 of the series. In No. 6 the discharge ceased in five days, and in No 7, in seven days and a half.

CANADA
MEDICAL & SURGICAL JOURNAL

Original Communications.

THE INITIAL RASHES OF SMALL-POX,

By William Osler, M D., L.R.C.P., Lond.,

Fellow of the Royal Microscopical Society, London, late Physician to the Small-pox Department of the Montreal General Hospital, and Professor of the Institutes of Medicine, McGill University.

In the abundant literature of small-pox, contained in the standard text-books, and scattered through the various periodicals, mention is occasionally made of rashes occurring in the initial stage of the disease. The reference to them in the ordinary English works on the Practice of Medicine is usually limited t two or three lines, stating that the eruption is sometimes preceded by an erythematous or erysipelatous rash, (see text books of Aitken, Wood, Watson, Niemeyer, Barlow.) Many make no mention whatever of them. (Bennett, Tanner). Even in the special works on the subject the notice is scarcely more extended.

Thompson* refers to a roseolous rash as a common precursor of varioloid.

Munro† speaks of a "rosy efflorescence as in measles preceding the eruption in malignant small-pox."

Gregory‡ makes no mention of them, but refers to a scarlatina-like rash in the progress of the secondary fever.

* On Varioloid Diseases, pp. 35 -151.
† On Small-pox, p. 97.
‡ On Eruptive Fevers, p. 49.

Marson* states, that in varioloid the eruption "is very often preceded by roseola, which lasts two or three days—the r. exanthematica."

Foreign Physicians appear to have paid more attention to them, and very good accounts are to be found in some of the recently translated works †

Many of the older authors believed them to be independent affections, and, according as the eruption was diffuse or mottled, spoke of scarlatina or measles occurring simultaneously with small-pox.

Sydenham was evidently acquainted with them, and refers to the difficulty they may cause in the diagnosis. "The aforesaid small-pox," speaking of the discrete form, "breaks out sometimes after the fashion of erysipelas, sometimes like measles. From these they are difficult to be distinguished even by the practised physician, provided that he goes by the external appearance only."‡

In some of the cases collected by Murchison§ of the supposed coincidence of two fevers at the same time, the mistake has been made of confounding the initial rashes with independent diseases.—(Illustrations, 3, 4, 5, 6, 7, 8, 9, 10.)

Our definite information on the subject dates from the publication by Dr. Theodor Simon of Hamburg (whose premature death last year was a severe loss to the profession in Germany), of a series of articles in the Archives f. Dermatologie und Syphilis, Bds II, III, & IV, on the "Prodromal Exanthems of Small-pox." Other papers on the subject appeared in the same journal from the pens of Drs. Knecht and Scheby-Buch, and less important observations have been published in several of the German periodicals within the past four years.

The probable reason why such scanty reference to them is found in the records of the older epidemics is that they appear

* Reynolds' System.—Article Small-pox.

† Trousseau.—Clinical Medicine (Sydenham Society)) Vol. 2.
Hebra. Skin Diseases, (Sydenham Society) vol. 1.
Ziemssen's Encyclopedia, Curschmann. Art. Small-pox.

‡ Works of Sydenham (Sydenham Society) Vol. 1, page 127.

§ Med. Chirurgical Review, 1859.

with great irregularity, some epidemics, as the one now subsiding, affording numerous instances, others very few.

Two forms of these rashes are to be distinguished, the diffuse scarlatiniform, and the macular or measly, either of which may be accompanied by petechiæ, and occupy a variable extent of the cutaneous surface. In some instances they are general, covering the whole body; as a rule, however, they are limited and show a decided preference for certain localities. This holds good especially for the purpuric rashes, which occur with greatest frequence in the abdominal region, occupying a triangle the base of which is formed by a line drawn from one anterior superior spinous process of the ilium to the other, the sides by Poupart's ligaments, the apex corresponding to the pubis. Another favorite situation is the inner surfaces of the thighs, (the crural triangle of Simon). A third is the lateral thoracic region, in a strip extending towards the navel, along the margins of the ribs. The above are the usual sites for the purpuric rashes, and in the majority of cases they occur in one or all of them. The simple erythematous and macular rashes, unaccompanied by petechiæ, are often much more extensive, spreading over larger areas. When limited, in which case the presence of purpura is common, they occur in the above-named situations, and also, according to Simon, "in the axillary regions, (axillary triangle) the extensor surfaces of the extremities, especially in the neighborhood of the knees and elbows, the backs of the hands and feet, on the genitals, and lastly, as a streak extending from the ankle along the skin over the extensor hallucis longus."

My experience has been that they are chiefly purpuric; in the limited number of cases which I have observed, only two, were unaccompanied by petechiæ. In very many of the cases reported by Simon and Knecht no mention is made of the presence or absence of cutaneous extravasations. Scheby-Buch, on the other hand, believes them to be, in most instances, of an hæmorrhagic nature, *i. e.*, numerous petechiæ occur upon an erythematous base. The following cases will give a good idea of the nature and extent of these initial rashes.

Case I.—D. R., æt. 14. Admitted November 28th. Vac-

cinated, one good mark. Revaccinated 8 days before admission, three points, which had taken, were just passing into the pustular stage. A diffuse erythematous rash of a dark-red hue existed over the abdominal region, extending upwards in the lateral thoracic areas, and downwards upon the thighs. Face much suffused, extremities unaffected. On pressing with the finger upon the skin of the abdomen, numerous petechiæ were evident, most abundant in the groins, and inner surfaces of the thighs.

Temp. 101°. Slight delirium. A papular eruption over face and arms.

29*th*.—Erythema has disappeared, leaving the ecchymoses visible as small, dark, punctiform spots, closely set together in the groin, and more scattered towards the navel. The largest existed in the lateral thoracic regions, over the serrati muscles. A few were also noticed on the legs about the inner surfaces of the tibiæ.

Course of the Disease.—Eruption became confluent on the face, discrete on the extremities and trunk. Not more than eight pocks appeared on the sites of the erythema. Instead of proceeding to maturation, the majority of the pustules aborted, and on the 11th day of the disease desiccation had begun.

Case II.—J. C., æt. 23, medical student. Vaccinated, one good mark. Admitted, December 15th, 1874. Initial symptoms, according to his own statements, had been tolerably severe. Papular eruption present on the face and arms. On examining the trunk a fading erythema was noticed over the thorax and abdomen. A diffuse ecchymosis existed over the anterior surfaces of both shoulder joints, extending above over the acromion processes, and internally over the outer half of the clavicles. Continuing into the axillæ, it involved the greater part of the skin in these fossæ, terminating below at the level of the fifth rib. A considerable amount of hyperæmia was present, and pressure with the finger revealed the fact that the ecchymosis was not uniform, but here and there left portions of the skin unaffected.

Numerous purpuræ in the groins and lateral thoracic regions,

some of which were of considerable size; none on the extremities, or inner surfaces of the thighs. Temp. 100.5°. General symptoms good. Pulse firm and strong.

Course of Disease.—Pocks numerous but discrete, and proceeded regularly to pustulation. Ecchymoses faded gradually leaving a yellowish-green discolouration of the skin over the shoulders, and in the axillæ. Desiccation early. Rapid recovery. No complications.

The first case affords an excellent example of the condition under consideration. The exanthem occupied the most usual situations, viz, the anterior abdominal and lateral thoracic regions, together with the inner surfaces of the thighs. On superficial examination the ecchymoses were not at first evident, becoming so, however, on the following day, when the erythema had faded.

The second case presents several points of interest. The initial symptoms were so severe, and such was the intensity of the prodromal exanthem, and extent of the cutaneous extravasations, that the gentleman who attended the case, though possessed of considerable experience in small-pox, believed it to be of the true hæmorrhagic variety. On first seeing it I expressed a similar opinion. The remarkable extent of the ecchymoses in the neighborhood of the axillæ was certainly very misleading, more especially, as it was accompanied by an eruption of purpura in the thoracic and lower abdominal regions. Indeed, in such a case, within the first 48 hours, it might be almost impossible to decide definitely, whether we had to deal with a simple prodromal exanthem, or with the initial symptoms of genuine hæmorrhagic small-pox. In the latter the exanthem would probably be more general, of a deeper hue, and present a greater number of petechiæ, and even on the second day hæmorrhage mighttake place from the mucous membranes.

The two following cases are the only instances which have come under my notice of a simple erythematous rash unaccompanied by petechiæ. Oddly enough, both subsequently became hæmorrhagic; in one the extravasations were limited to the pocks upon the legs, and a good recovery was made; the other proved to be of the true hæmorrhagic variety.

Case III.—J. M., æt. 25. Vaccinated, one good mark. Admitted, January 28th. Initial symptoms not severe. A diffuse erythematous rash existed over abdominal and thoracic regions. According to patient's statements, it had been brighter, and was fading at time of admission. It was unaccompanied by any purpuric spots, either in the regions affected, or in other parts of the body. Eruption discrete, papular, very scanty upon the abdomen.

Course of Disease.—Progressed favorably, but presented peculiar characters, inasmuch as extravasation took place about the pustules on the legs on the 5th day, and was followed by a subsidence and rapid desiccation of the eruption.

Case IV.—A. McR., æt. 19, a strong Scotch girl. Unvaccinated. Admitted January 31st, from the general wards, where she had been under treatment during two weeks for some ill-defined affection. Initial symptoms very severe. There was on admission a deep erythematous rash over the whole body, most intense on the abdomen and thorax, and unaccompanied by ecchymoses. Face and arms of a deep red colour. Papules very general. Temperature 103.3°. Pulse, 116. Respirations, 22. Feb. 1st, erythema fading on the trunk.

Course of Disease.—This case proved to be of the hæmorrhagic form, and is interesting from the fact, that a *simple* erythematous rash was among the initial symptoms, the extravasation into the skin not occurring until the third day of the eruption, when the erythema had disappeared.

Patients are usually sent to hospital on the third or fourth day of the disease. The initial rashes are often among the earliest symptoms, and may, if of the simple erythematous variety have disappeared, whereas, if purpuric in character traces of them will remain for days. In some instances, a fading erythema was noticed on admission; in others, no history of any could be obtained, though the petechiæ were present. The following cases illustrate this:

Case V.—M. C., æt. 15. Vaccinated, one good mark. Admitted Jan. 18th. Initial symptoms severe, well-marked rigor. Temp. 102.2°. Pulse 102. Resp. 24. Only a few papules

visible on the face and about the wrists. Petechiæ on back, sides, groin, and legs. Those upon the back were scattered and small, on the abdomen they were thickly set and large, especially in the hypogastric region. On the lower limbs they existed as small circular spots of dark red colour on the inner surface of the thighs and the extensor surfaces of the legs. In this case I could obtain no history of an erythematous rash.

Course of Disease.—Favorable. Eruption discrete; desiccation early; recovery rapid.

Case VI.—T. C., æt. 20. Vaccinated, one good mark. Admitted Feb. 16th. Initial symptoms moderate. Eruption discrete, in the papular stage. Abundant petechiæ in the lower abdominal region, and in the groins; also a few over the serrati magni muscles. None upon the thighs, or legs. No trace of an erythematous rash, nor could it be gathered from the statements of the patient that one had existed.

Course of Disease. General symptoms good; pustules formed normally. Purpura faded within the first week.

Case VII.—T. B., æt. 22. Vaccinated, one good mark. Admitted December 31st. Eruption discrete and in the vesicular stage. Temperature 98.4.° Ill since the 27th. Initial symptoms mild. Numerous small purpuric spots in the groins, arranged chiefly parallel to Poupart's ligaments, and extending internally over the recti muscles. Similar spots, though somewhat larger, existed in a line with the lower ribs, extending towards the navel. According to the statements of the patient, on the second and third day of his illness, there was a rash on the lower abdominal region.

Course of Disease.—Pustules few in number. Recovery rapid.

Case VIII.—R. W., æt. 20. Vaccinated, one indifferent mark. Admitted Jan. 10th. Initial symptoms mild. A plentiful eruption on face, buttocks, and arms. A diffuse erythema present over the whole trunk, and, in a limited degree, over both elbows. Accompanying this were abundant petechiæ, especially numerous in the groins, the lumbar region behind, and

the posterior surfaces of the the thighs. Jan. 11th. Erythema had disappeared entirely. On the buttocks, back, and extensor surfaces of the arms and thighs, the pustules were collected into small groups.

Course of Disease.—Pustules did not maturate fully; desiccation early. Recovery rapid. This was the only instance in which the initial rash was present on the extensor surfaces of the joints.

Occasionally the initial rash is late in appearing, and may follow rather than precede or accompany the eruption.

Case IX.—H. A., æt. 28. Vaccinated, five good marks. Admitted April 3rd, with a disseminated papular eruption. Initial symptoms had been tolerably severe.

April 4th. At morning visit an erythematous rash, accompanied by numerous petechiæ existed over the lower abdominal regions, and groins. Erythema not intense, petechiæ small, and closely set together.

April 5th.—Rash had disappeared.

Course of Disease. Pustules developed well. General symptoms good. Purpura had faded by the seventh day, leaving light brown discolourations to mark the places where they had existed..

The initial rashes in the foregoing cases, with one exception, (case IV), occurred in the discrete form of variola, and though recovery, as a rule, was rapid, none of the cases could properly (unless, perhaps, case VII), be classed as varioloid. One of the last patients admitted into the Hospital afforded an instance of an initial purpuric rash in the mildest possible form of small-pox.

Case X. W. A., æt. 17. Vaccinated, two good marks. Admitted June 2nd. Eruption scattered, pustules few in number, not more than 30. On admission an abundant purpuric eruption, accompanied by a slight degree of erythema, existed over the lateral thoracic regions, the abdomen, and inner surfaces of the thighs. Between the navel and the pubis was a large superficial ecchymosis, about half the size of the hand, extending in a somewhat semi-lunar form. The purpuric spots

in the groins were of large size, and arranged chiefly parallel to Poupart's ligaments, at a distance from ½"–1" above them. A few isolated ones extended over them to the anterior region of the thighs, while others existed on the upper third of the inner surfaces.

Course of Disease.—Up on the 5th day.

The last case observed is interesting from the fact that the initial rash took the form of an extensive urticaria.

Case XI.—A. E., æt. 29. Vaccinated, one bad mark. Admitted April 7th. Initial symptoms had been moderate. On examination an eruption was found upon the trunk and extremities which presented the usual characters of urticaria, viz, elevated reddened patches of unequal size, in some places arranged linearly, in others forming broad areas, light in the centre, deep red at the periphery. On the trunk they were chiefly grouped together, being most abundant on the anterior surface, while on the extremities they were arranged in raised lines, the typical wheals of the affection. In the neighbourhood of the ankles and back of the feet they were of large size, and showed better than anywhere else the characteristic features of the eruption The patient complained of sensations of heat and itching, and wherever he scratched violently a fresh outbreak occurred. A few papules of variola were noticed on the face, and about the wrists.

April 8th.—Urticaria persists, though not so marked on the trunk.

April 9th.—Has disappeared from the trunk, and greater part of the extremities; a few only remain about the ankles. At the evening visit no trace of urticaria could be found. Pocks few in number, not more than 60.

Patient got up on the 10th, and remained in the hospital twelve days.

Simon* expresses himself as somewhat skeptical about the occurrence of genuine urticaria as a prodromal exanthem in small-pox, believing that most of the cases described as such should be referred to the macular or measly rashes. I think there can be no doubt about this case, the wheals were

* Loc. Cit.

too characteristic to allow of mistake. A genuine case is also reported by Starck, (Arch. der Heilkunde, Vol. iv.) in which the urticaria appeared and disappeared in different parts of the body in the course of the disease.

Simon calls attention to the fact that the simple macular and diffuse rashes are not unfrequently accompanied by sensations of heat and itching, which in the case of the former might cause them to be confounded with urticaria.

The frequency with which the prodromal exanthems occur is apparently subject to considerable variations, depending, perhaps, on the type of epidemic, which has exhibited marked changes within the present century. The epidemic which has raged in so many parts of the world since 1870 has been of an unexampled severity, owing, in great part, to the large proportion of hæmorrhagic cases, and has been further marked by the very general prevalence of the prodromal exanthems. That no reference is made to them by so many of the old authors, and that such scanty notice is found in the more modern works, can only be explained on the supposition of their infrequence in former epidemics.

In 1088 cases of small-pox observed by Knecht, (Arch. f. Derm. u. Syph. iv), prodromal exanthems occurred in 104 or about 10 per cent. In 1413 cases of Scheby-Buch there were 237 instances of these rashes, or 16¾ per cent.

In 81 cases under my care there were 11 instances, *i. e.*, about 13 per cent. Simon does not give the percentage in his cases, but from the number recorded in his series of articles on the subject it must have been large.

The localities most commonly affected are the anterior abdominal surface, and the inner surfaces of the thighs. Thus in Scheby-Buch's 237 cases these regions were affected in 190 instances. In the few instances which have come under my notice, the lateral thoracic areas were more frequently the seat o the exanthem than the inner surfaces of the thigh; nor did I observe any cases in which the rash was absent from the anterior abdominal regions. Many cases are recorded in which the exanthem remained limited to the regions of the joints,

(elbows and knees), or the backs of the hands, the axillæ or the inner surfaces of the thighs, without the simultaneous affection of the abdominal surfaces. When confined to the extremities, both upper and under are implicated as a rule, the rash is rarely limited to either alone. Occasionally they are unilateral, in which case they are always of small extent. The general erythematous rashes are rare: in Scheby-Buch's 237 cases there were only 14 instances. Neither of the above mentioned authors state the proportion between the simple erythematous rashes and those accompanied by purpuric spots. Indeed, in the reports of many of Simon's cases no mention is made of their presence or absence. In the 11 cases which have come under my notice the latter greatly exceeded the former, the proportion being 8: 3.

A consideration of the diagnostic and prognostic value of the initial rashes is of great interest: for, of course, the worth of a symptom is in direct ratio to the amount of knowledge it gives us in deciding upon the nature of a case, and forming an opinion as to its probable issue.

From the fact that a patient is rarely or never sent to Hospital until the characteristic eruption has made its appearance, *i. e.*, on or about the fourth day of the disease, none of the above cases were of any service to me in forming a diagnosis; that had already been made. In any case the value of the initial rash depends greatly on the date of its outbreak, which extends from 1 to 5 days before the appearance of the eruption. In the majority of cases it comes out on the second day, and if of noticeable extent would consequently be of diagnostic importance, more especially if accompanied by petechiæ. Indeed, Curschmann* states that in the initial stage of the disease there is only one pathognomonic symptom, and that is, the hæmorrhagic exanthem situated in the triangle of the thigh. The petechial rash is of much greater diagnostic value than the simple erythematous, and a case of fever presenting an eruption of purpura in any of the above oft-named localities on the second or third day should be looked upon with grave suspicion. Simon maintained that even before the onset of the fever, and prior to

* Loc. Cit.

the general disturbance of the system, the diagnosis could be determined by the appearance of the characteristic prodromal exanthem. This is going very far; still, he has recorded two such cases, and quotes two others. In his 38th case there was an initial rash in the inguinal regions, and about the anus, for the greater part of a day before the onset of the fever and constitutional disturbance. The former set in with a rigor, and was followed by a great extension of the exanthem. It is to be remembered that prodromal rashes are not peculiar to small-pox, though, no doubt, they occur with much greater frequence in this disease than in any other. Scheby-Buch states that he has met with simple erythematous rashes in the initial stage of tonsillitis, typhoid fever, and measles, presenting the same distribution, and differing only from those of small-pox in intensity and extent. Purpuric rashes, however, are excessively rare, if they occur at all, in the first stage of the ordinary febrile affections; so that they are of chief moment among the prodromal exanthems of small-pox, and may be regarded as affording a tolerably certain basis for diagnosis. The general erythema, which is met with in a limited number of cases, is usually of the diffuse form, and, occurring on the second or third day, might be confounded with scarlatina. The points to be attended to in the diagnosis would be, the mode of attack, which in the two affections presents certain differences; the colour and extent of the exanthem, which is brighter in scarlet fever, and, as a rule, much more extensive; and lastly, the presence of minute petechiæ in the inguinal regions would be in favor of small-pox.

The diffuse erythema accompanied by numerous petechiæ which occurs on the second or third day in cases of malignant small-pox, could not be distinguished from the similar condition met with in those rare cases of hæmorrhagic scarlatina. The presence of an epidemic of one or other disease would be the only means of deciding the nature of the case.

Simon regards the prodromal exanthems as eminently characteristic of small-pox, and among his cases, which are all of great interest, we met with some of special significance. Thus in the case of a girl who had had a rigor, fever, pains in the back and

head, and initial rashes in several places on the extremities, though no eruption followed, the diagnosis of small-pox was made, and confirmed by the fact that the sister, who had acted as nurse, took the disease badly. He also records cases in which, with the outbreak of the prodromal exanthem, the temperature sank and the general symptoms subsided, coming on again with the appearance of the eruption, and finally subsiding on its completion. Whether from a diagnostic point of view we agree with this author's estimate of the value of these initial rashes or not, there can be very little doubt that in a limited number of instances they may be of considerable service, in enabling us to decide upon the nature of a case, and therefore take early precautionary measures for the isolation of the patient.

Of the value of the initial exanthem in the prognosis of the disease the opinions of authors differ. Simon makes the general statement, that, "among the severe and fatal cases of variola just as many were accompanied with prodromal exanthems as those without," and he regards their prognostic significance as *nil*. It struck me, however, in reading over his cases that the number of deaths was comparatively small.

Knecht in 115 fatal cases of small-pox met with the initial rashes only 15 times, and as this observer noted 104 instances his experience supports the view that they are, on the whole, of favorable significance. He states that up to the 30th year they are of no prognostic value, but after this age they indicate a severe course, while in old age they are almost invariably of evil omen.

Of Scheby-Buch's 237 cases. 37 died; *i. e.*, about 15 per cent. His experience does not bear out Knecht's supposition, that after the age of 30 the prodromal exanthems are of serious import. Curschmann believes that the simple macular and erythematous rashes almost invariably precede varioloid, and states, that in many instances the number of pustules was in inverse ratio to the extent of the initial rash. On the other hand, the purpuric rashes, in his experience, especially those in the regions of the groin, are almost always followed by variola vera. The 11 cases above reported do not support the view; the only

fatal case among them was preceded by a simple erythematous rash of considerable extent and the other instance of an erythematous rash was not followed by varioloid. Not one of the eight instances of initial purpuric exanthem proved to be variola vera : they were all followed by the milder forms of the disease. two of them being varioloid.

Trousseau* states that while in natural small-pox the scarlatiniform rashes accompanied with purpura constitute alarming symptoms, they do not lead to an unfavorable prognosis in the modified form.

Professor See† believes that the scarlatiniform and rubeolic rashes precede as a rule benign cases, the hæmorrhagic variety the severe.

Hebra‡ holds that the appearance of the rash upon the abdomen is not "necessarily to be regarded as an unfavorable sign. These cases do, however, more often terminate badly than in recovery, and particularly when the affection passes beyond mere hyperæmia into hæmorrhage, when, in fact, a purpura rather than an erythema shows itself on the abdomen and on the thighs."

On the whole the presence of initial rashes in the majority of cases indicates a favorable termination, but it is evident from the foregoing statements that we cannot as yet lay down definite rules with reference to their prognostic value. In forming an opinion we must not rely on the nature and extent of the exanthem alone, but take into account the general symptoms, not as Sydenham says "go by the external appearance only."

The prodromal exanthems it may be remarked occur with much greater relative frequence in men than in women.

A debated point has been, whether the small-pox eruption ever appears on the regions which have been affected with the initial rashes. In very many instances these parts present an entire immunity, which may be owing to the fact that the rashes occupy just those regions most commonly spared by the small-

* Loc. Cit., Vol. 11, p. 71.
† Journal de Medicin, Juin, 1875.
‡ Skin Diseases, Vol. 1, p. 58.

pox pustules. The lower abdominal and inguinal regions are rarely the seats of an abundant eruption, and often remain free, while the rest of the surface is involved to a considerable extent. I have several times seen isolated pustules develop in the hypogastric region after an initial rash.

Most authors refer the phenomena in question to disturbances in the vaso-motor nerves, caused, Simon supposes, by hyperæmia of the cord, which affects injuriously the vascular nerves, passing down from the medulla. "If," in his own words, "the affection of these nerves is wide-spread an erythema universale follows, while if limited to certain groups we notice circumscribed erythemas; and, as the chief site of the affection (hyperæmia?) of the spinal cord is in the lower dorsal and lumbar regions we have in the majority of cases the erythema confined to the lower parts of the trunk."

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Acute Rheumatism treated with Salicylic Acid.—Under DR. ROSS. Reported by Mr. H. N. VINEBERG.

The following case illustrates well the effect of the great new remedy for rheumatism. The case was certainly quite severe, but the relief to the pain was very rapid. As the temperature was almost normal on the 19th inst., and there was perfect freedom from pain, the acid was stopped, as some complaint had been made of burning in the stomach from it. The result of this, it will be observed, was the immediate return of all the febrile and painful phenomena. A return to the remedy again very soon removed them, and produced a rapid cure. It seems quite necessary to continue the acid for a few days after the patient is completely relieved.

L. P., æt. 22, was admitted into the Montreal General Hospital on the 14th of September, 1876, under the care of Dr. Ross, with Acute Rheumatism. No history of rheumatism

in the family. She never had rheumatism herself before. Had typhoid fever last summer. Has been frequently exposed to draughts, and sleeps with the windows of her bed-room open. Eight days ago first began to experience slight pain in both limbs. The pain came on during the day-time. The following day she was comparatively free from pain, but on the second day was seized with a severe pain in both shoulders. It soon left the shoulders and went to the hips, where it remained for some three days, and then migrated to both knee-joints, ankles and toes.

Condition on admission—Severe pain in the shoulders, elbows and wrists. The joints are slightly swollen, very hot and tender. Also has some pain in both knee-joints, the right knee being somewhat swollen, tender and hot. Tongue considerably furred, with a red border. Anorexia. Bowels regular, very copious perspiration; whole body is covered with sweat, which is very acid; urine very high coloured and acid, and with a high deposit of lithates. Temperature 102°; Pulse 120, full and compressible. Heart sounds normal. Ordered milk, and to take gr. v. of salicylic acid every hour.

Sept. 15*th.*—Pains much better to-day. Perspires very freely. Saliva distinctly acid.

Sept. 16*th.*—Slept well last night. Pains all gone from the joints, with the exception of the left shoulder. The other joints feel stiff. To take medicine only every two hours. Urine feebly acid. Saliva and perspiration very acid. Still perspiring very much.

Sept. 17*th.*—No pains whatever to-day. Joints still feel somewhat stiff. Rested very well last night. Perspires considerably still. Tongue heavily coated. Bowels not moved since admitted.

Sept. 18*th.*—No recurrence of the pains. Had three attacks of epistaxis during the last 36 hours. Heart sounds normal. Says medicine makes her sick at the stomach, causing some uneasiness, and a burning sensation. Only to take it every six hours in the future.

Sept 19*th.*—To discontinue the salicylic acid, and the following mixture was ordered. Quinæ sulph, gr. xii; acid nitro muriat. dil. ℥ii; aquæ ad ℥vi; a table spoonful three times a day.

Sept 20th.—Recurrence of pain in both shoulders. There is a slight roughening with the first sound of the heart, heard over the 3rd cartilage. To have gr. x. of salicylic acid every two hours, and to discontinue quinine mixture.

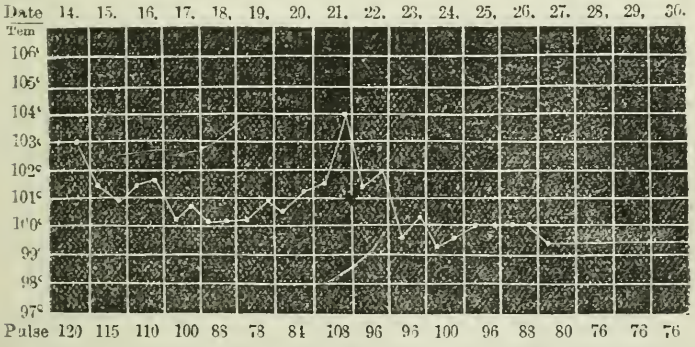
Sept. 21st.—Had a very poor night. Pain in both wrists to-day, none in the shoulders. Has a pain between the shoulders behind, which shoots to the left wrist. Bowels moved freely last night by medicine. Owing to some error did not get the salicylic acid till late in the evening. Roughness with first sound pronounced.

Sept. 22nd—Pains all gone to-day. Wrists a little stiff only. No change in sounds of heart.

Sept. 23rd.—Condition about the same as yesterday. To have gr. v. of the acid every four hours.

Sept. 24th—Sleeps very much. Says medicine makes her sleep. Tongue coated. The roughness with first sound has become a distinct, but soft, blowing murmur, with maximum of intensity at the junction of the 5th cartilage with the sternum. To have medicine only four times a day.

Sept. 29th.—Has had no recurrence of the pains. The murmur, for the last four days, has been becoming less distinct every day, and to-day it cannot be detected at all. Feels quite well, asking for food. Still taking five grains of the acid four times a day.



Oct. 1st.—Up and doing well. Joints as well as ever, Ordered half diet, and a tonic mixture. Continuing quinine and nitro-muriatic acid.

Case of Tubercular Meningitis. Under Dr. Ross. Reported by Mr. C. L. Cotton.

E. H., æt. 21, was admitted into the Montreal General Hospital on the 27th October, 1876, under Dr. Ross, and was said to have typhoid fever.

History.—Has formerly been troubled a good deal with headaches. Last winter she had swelling of her legs, for the greater part of the winter, accompanied by a constant headache. Father died two years ago. Cause not known. Mother living. Catamenia always regular. She has been sick for the last fortnight, the predominant symptoms have been a *constant severe headache, vomiting and constipation.*

Oct. 29th.—Patient has been delirious since eight o'clock last night. Delirium of an active, talkative, singing kind. Hands are constantly moving about the head. She is constantly rubbing her nose as if it irritated her. She is perfectly unconscious. Muttering, and talking is continuous. Vomited often during the night. Was given an enema which operated freely. Some apparent tenderness over the abdomen. Pupils are dilated. They oscillate when exposed to light and do not fully contract. The nail drawn across the skin of the abdomen leaves a deep red mark, which is persistent for some time, (*Tache cerebrale* of Trousseau). Pulse 88, small and weak. Respirations 18. Lips parched and dry. Temperature 101⅗° Fah. Urine contains 25 per cent. of albumen.

Heart and lungs examined and found normal in every respect.

Ordered a purgative of calomel and black draught. Sinapisms to back of neck, and pot. brom. gr. x. pot. iod. gr. v. three times a day.

Oct. 30th.—Was delirious all night, but the delirium has subsided, and she now lies in a half stupid condition. Dull expression. Can answer questions slowly.

Tongue coated with a heavy white fur. Pupils still dilated, and do not act well to light. About 25 per cent, albumen in urine. Sp. gr. 1030. Abdomen *not so tender* on pressure.

Had an enema last night which moved her bowels very freely.

Oct. 31st.—She is rather more dull to-day. It is with great

Oct. 5th.—Discharged well.

difficulty that she answers questions. Urine still albuminous. Complains of a severe frontal headache. Some tenderness over abdomen.

Pupils dilated and oscillating. Tongue very heavily coated with a white fur, moist. Bowels not moved.

Nov. 1st.—Mental faculties more stupid to-day. A very severe headache. Tongue dry and dirty brown. Pupils dilated, the left more than the right. She complains of a pain in the chest, and a very severe pain *at the back of the neck.* and also some *pain in the back.* She is constantly moaning. Urine 20 oz. Very turbid and a heavy deposit of lithates, 25 per cent. of albumen. Had a purgative of calomel and black draught last night, and an enema this morning but her bowels have not moved. Same condition of skin, but not quite so marked.

Nov. 2nd.—Same dull condition of mind. She answers questions slowly, and does not always seem to understand their meaning. Face flushed. Pupils dilated. The left more than the right and oscillating. Complains of the light hurting her eyes. Internal strabismus of right eye evidently caused by paralysis of external rectus of left eye, Frontal headache. Pulse, 100, weak but regular. An apathetic expression of countenance, the mouth wide open and eyes nearly closed. The peculiar condition of skin which was noticed at first is still present, but not quite so marked. Urine still albuminous.

Dr. Ross discovered slight traces of sugar. Had an enema last night which moved her bowels very freely. Ophthalmoscopic examination of eyes by Dr. Buller. Margins of optic nerve, specially upwards and inwards, are not well defined. Retina slightly hazy. Optic disc rather paler than usual at her age.

Nov. 3rd. — Still in the dull condition. Pupils dilated. Equal in size. Internal strabismus of right eye continues.

Sordes on lips. Face covered with a profuse perspiration. Bowels not moved.

Nov. 4th.—Passed her evacuations under her unconsciously. She had Ol. Crotonis *mi*, last night which operated very freely. She is in a much more stupid condition to-day. Cannot answer questions. Eyes closed, and the light seems to pain her. Con-

junctiva of right eye somewhat injected. Pupils dilated, but not to quite so great a degree as heretofore—of equal size. Strabismus not quite so much marked. Tongue coated with a heavy brown fur and dry. Same peculiar condition of the skin present. Urine albuminous. Pulse, 120. A red rash on back of both forearms. Cheeks are flushed. Died at 10.15 P.M.

Autopsy 17 hours after death, by Dr. Osler:

General Appearance.—Body, that of a tolerably well nourished young girl. Rigor mortis present in a slight degree. Post mortem discolouration in the dependent parts. Thin layer of panniculus adiposus. Muscles normal in colour.

Brain.—1270 grammes. Parts about optic nerves matted together, arachnoid thickened. Pia mater very adherent. No lymph nor inflammatory products present. No miliary tubercles discoverable on superficial inspection, but on spreading out the middle cerebral arteries under water, many of them were observed about the smaller arteries, chiefly as fusiform thickening. *Cortex;* veins moderately distended. Convolutions slightly flattened. Small veins over convolutions also full. On section white substance pale. Puncta vasculosa indistinct. Lateral ventricles distended, and contain one ounce of fluid. Lining membrane of the ventricles slightly granular. Surface of optic thalami soft. Fornix and septum lucidum exceedingly soft and tore in the removal.

Spinal Cord.—Much blood oozed from the vessels about the dura mater, and a thick layer of fat exists between the laminæ and this membrane in the dorsal region. Arachnoid looks a little opaque in the upper part of the cord. In the lower three-fourths this membrane was covered with numerous small cartiliginous plates irregular in outline, flexible, and of the usual glistening whiteness of these bodies. Veins of pia mater full posteriorly. No trace of miliary tubercle. Substance appeared in section quite natural.

Thorax and Abdomen.—Position of thoracic viscera normal. Sigmoid flexure very long, 16 inches, and passes across from left

to right, just above the symphysis pubis. Rectum descends on right side. Pericardium appears distended, and a small amount of fat exists upon it, and it contains 6 oz. of slightly turbid fluid.

Heart.—Weight, 300 grammes. No clots. Considerable amount of blood in the cavities. Valves of right side healthy. Walls of left ventricle appear slightly thickened, valves normal. Endocardium on the septum, immediately below aortic valves, a little opaque.

Right Lung.—A large amount of blood flowed out from the pulmonary veins on removal. Whole of the lower lobe dark in colour, heavy. On section surface bathed with bloody serum. No crepitation can be felt. Small portions of the organ from superficial parts float in water, from the deeper parts they sink. Deeper part of the middle lobe of the lung is in a similar condition, and also the anterior part of the upper lobe below. A few miliary granulations seen in the substance of this lung.

Left Lung.—On careful inspection a few small miliary granulations seen on the visceral layer of the pleura, and on section a few are also evident in the substance. The lung is crepitant throughout, and contains an average amount of blood. Bronchial glands enlarged, and one presents several caseous masses. Small miliary tubercles are also evident throughout them.

Spleen.—Capsule slightly opaque, and covered with a few small fibroid thickenings. A small supernumerary spleen, about the size of a walnut, is situated just below the tail of the pancreas. Anterior border of the organ presents three, posterior border two, fissures. No tubercles evident on the capsule or in the substance. On section the organ is soft and dark in colour.

Right Kidney.—130 grammes. Capsule easily detached. Surface smooth. Venæ stellatæ evident. On section two small tubercles noticed in the cortical portion. Cortex presents a series of alternating red and white lines. Pyramids slightly congested, and a good deal of blood oozes from the vessels at their bases.

Left Kidney.—160 grammes. Appearances similar to those in the right. No tubercles evident.

Stomach.—Slight post-mortem softening in the dependent

part from post mortem digestion. Small amount of mucus over the surface.

Duodenum.—Healthy. Bile flows from the puncta biliaria on pressing the gall bladder.

Small Intestines.—Peyer's glands solitary and agminated in the region of the ilium very distinct. Otherwise normal.

Liver—1235 grammes. Firm. On section, of a uniform reddish colour. Lobules indistinct. A good deal of blood flows out from the cut on section of the veins.

Uterus and Ovaries —A recent corpus luteum found in right ovary, presenting a yellowish rim, enclosing a firm reddish clot. The mucous membrane of the uterus pale, a few of the larger vessels only being visible. On examination the uterine glands and epithelium are present, and appear normal.

Reviews and Notices of Books.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M. A., M. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, in the Medical College of Ohio: etc., etc. New York: D. Appleton & Company, 1876.

Bartholow's Materia Medica is, we believe, the latest work upon that highly important department of Medical Science that has issued from the American press. In many respects it is deserving of commendation at the hands of the Reviewer. It is neither too ponderous nor too diminutive. Its size does not fill one with the awe felt by the sight of the three large tomes of Pereira's Elements,—nor does it cause a sigh for more, as when one turns over the pages of the notorious Hunter Lane. But in a happy mean in an 8vo. of 537 pages, the author has comprised just what is likely to be of practical utility to the physician upon the subjects taken up. Dr. Bartholow entered upon his task with several advantages, and he brought to it the claims not merely of the plodding book compiler, but far higher, those of the independent original observer. He was

for several years a teacher of Materia Medica and Therapeutics, he pursued a number of researches bearing upon them, and has supplemented the knowledge thus gained by a clinical experience of 22 years' length. The outcome of all this in the work before us, is a good digest, not only of the information to be found in the older works, but also of that which has accumulated, since their date and is chiefly confined to the serials or periodicals in which it first appeared. One cannot live alone in the past in Materia Medica any more than in anything else. New remedies are steadily being added to our former store,—and some of them are of the greatest worth, to wit, Nitrite of Amyl and Salicylic Acid. All such are fully treated of in this volume in a clear, concise and able manner.

The author's classification of medicines is both novel and interesting. It includes the following divisions: Remedies used I. To promote constructive metamorphosis; II. To promote destructive metamorphosis; III. To modify the functions of the nervous system, by (*a*) exciting functional activity; (*b*) depressing or suspending functional activity; (IV) To cause some evacuation from the body, such as Cathartics, Emetics, &c., and (V) To act topically. Simple though this be, we think a still simpler arrangement will be found to gather in the actual tendencies of all remedies. They nearly all tend to excite or urge on functions. They nearly all are stimulants,—either general or local,—acting upon either one function alone, or upon several functions. The exceptions to these operations are very few. Upon these few facts the whole materia medica might be made to include medicines, which I. tend to stimulate, and II. do not tend to stimulate. The first to include stimulants proper, and besides them narcotics, and evacuants, and counter-irritants, &c. The last to include such agents as sedatives, demulcents, &c. Such an arrangement may smack of the old Brunonian fancies,—but it is one the worth of which in its practical bearings will be easily appreciated by the practitioner. While upon the benefits to be had from reducing things down to the simplest comprehension; we may here also express the wish that writers upon Therapeutics would draw a line of distinction between Absolute and

Relative remedies. As disease is now treated, the latter occupy a far more prominent and frequent place than the former. Who ever thinks of prescribing for Amenorrhœa any of the reputed absolute emmenagogues ? Is not the usual course to treat the disorder by removing the condition upon which the suppression depends ?

We notice a useful introduction in the work before us, which seems worth mentioning. It is a paragraph under most of the articles to name the " Synergists ;" that is to say, the medicines that act in the same way with the one under examination. For example, under Chloroform we find " Synergists, Anæsthetic agents, opium, chloral, alcohol, etc., promote the action of chloroform :" under colchicum we find " Synergists, such alkaloids as produce gastro-intestinal irritation, and depress the action of the heart, *e. g.* veratria, aconitia, etc., are synergistic. Therpeutically considered emetics, purgatives, alkalies, promote the activity of colchicum :" and so on under the majority of the articles discussed.

Lastly, we would remark, that this excellent work has been written rather for the physician than the druggist. Accordingly the mode of preparing drugs, and the formulæ of the officinal compounds are purposely omitted. The aim has been steadily kept in view to produce a treatise more therapeutical than pharmaceutical in character. To all in need of such a book ;—and who is not in need of the latest instruction upon the weapons of his warfare ? who in busy practice is not desirous to have that information in the most condensed, and at the same time most easily accessible form ? To all such we heartily commend this book. We feel sure those who study it best, will thank us most for having brought it to their notice.

A Practical Treatise on Diseases of the Eye. By Robert Brudenell Carter, F.R.C.S., Ophthalmic Surgeon to St. George's Hospital, &c., &c. American Edition edited by John Green, M.D., of St. Louis ; with 124 illustrations ; 8vo., pp. 595. Henry C. Lea, Philadelphia, 1876.

The enormous strides made in the science of Ophthalmology within the last quarter of a century can only be dimly discerned

through the flood of literature which, up to the present time, continues to be poured in upon the reading world; and perhaps no one can fully appreciate the full extent and breadth of the subject, who has not attempted to collate from and embody in a single treatise the leading facts contained in this vast bulk of material.

For such an undertaking, if the treatise is to be a readable one, something more than mere plodding industry is requisite; the author should have a perfect command of the language in which he writes, and, what is almost equally important, he should be a perfect master of his subject. Given, then the capacity for labor, together with the two last mentioned qualifications, and it will be safe to predict that such an author will produce a high classed work on any subject he may choose to treat of.

The work under review has emanated from the pen of a gentleman who has attained a high reputation as a writer, apart from the speciality of which he is one of the brightest ornaments. Although containing much that may be found in any other treatise on Ophthalmology, the whole work smacks of originality, both in its arrangement and in the freedom with which the author expresses his own views, though without entering into lengthy discussions such as are to be found in some of the more ponderous volumes of a similar kind written within the last few years. Thus it happens that many of the dry details to be found in "undigested compilations" are left out; nevertheless, there is a very great deal of information contained within a comparatively small compass—though nothing of importance seems to have been omitted for the sake of originality. From the specialist's point of view, the book might justly be styled incomplete, but it is none the less well adapted to supply the wants of the much larger class of readers who cannot be expected to acquire a thorough knowledge of other than the common forms of diseases of the eye.

After discussing the anatomy and physiology of the eye sufficiently to enable the reader to refresh his memory on all strictly practical points connected with this division of the sub-

ject, a very clear and concise description is given of the way in which a methodical examination of the organ is to be conducted in order that no departure from the normal state shall escape observation. This includes, of course, a description of the ophthalmoscope and its uses. Here we do not find as much attention given to the art of determining the state of refraction, by the aid of the ophthalmoscope, as might be desired by any one aiming at proficiency in its use. Some five pages are devoted to the description of a demonstrating ophthalmoscope invented by the author, who seems to have forgotten the circumstance when he states, further on, that "the safest man is he who never invented an instrument in his life, but whose daily practice affords evidence that he can use those which have been invented for him by others."

We now come to the chief feature in the arrangement of the work, and which, so far as we have seen, distinguishes it from all other recent treatises on Ophthalmology, and that is the introduction of two long chapters on "The Principles of Ophthalmic Therapeutics and Ophthalmic Surgery," before proceeding to treat of diseases of the eye *in specie*. Both of these chapters are exceedingly well written, and will amply repay a careful perusal, as they contain many valuable hints of an eminently practical character, together with a description of the ordinary instruments required in operating upon the eye; and instructions for their use are given in detail worthy of the importance attaching to this department of Ophthalmology.

The chapter which treats of diseases of the conjunctiva is, perhaps, a little deficient in the matter of classification of the diseases of this structure, but the deficiency has been pointed out, and to some extent remedied by the American editor, who has also done good service in making some additions to the text, and in supplying foot-notes, in relation to some points which have seemed to him to require further elucidation or call for criticism.

It would be difficult to find a better essay on iritis and its sequels than that contained in this book and the remainder of the work which treats of cataract, glaucoma, the diseases of the fundus oculi, wounds and injuries of the eye, affections of the ocular

muscles, accommodation and refraction, and the uses and selection of spectacles is fully up to the present state of knowledge concerning these things as far as can be comprised in a work of this size. He who wishes to study the pathology of diseases of the eye will find but meagre satisfaction from this treatise, but for the busy practitioner who desires to keep up his knowledge of ophthalmic medicine and surgery with the least possible amount of labour, there is probably no better text-book in the English language, and for the student who hesitates before taking up any new and extensive study, and who recoils at the sight of huge volumes reeking with optical puzzles and algebraical formulæ, there can be no more welcome boon.

A Contribution to the Treatment of Uterine Versions and Flexions. By EPHRAIM CUTTER, A.M., M.D. Second Edition, entirely re-written, with 29 illustrations on wood. 8vo. pp. 216. Boston: JAMES CAMPBELL, publisher, 1876.

This little work has issued from the press, as the author expresses it, not as "a piece of fine writing," but rather as a contribution from the pen of one who believes it the duty of every man to better the profession of his choice if he can. So far as uterine flexures and their mechanical treatment is concerned, we must admit that Dr. Cutter has in a measure done his part. The object the author has in view is principally to extol a uterine pessary which goes by his name, and which seems to be an excellent article of its kind. In nearly all works on the subject of uterine diseases, imaginary drawings are given showing the excellent results of the introduction of some form of mechanical support for the relief of uterine displacements. These are remarkably satisfactory as far as a book illustration goes. We see the uterus which otherwise, is bent or twisted, flexed or hanging down, set up in its right and proper position, and there retained, as though it were fresh from the hand of Dame Nature. The practical man, however, is sorely perplexed and somewhat disgusted when on the use of any of these sup-

ports he finds that they do not correct the difficulty nor remedy the displacement. In making these remarks we do not desire to run a tilt against all pessaries, but we are forced to the conclusion, after our own limited experience, that of all the patented and non-patented contrivances the *perfect coming pessary* has not yet seen the light of day. Dr. Cutter in his introduction gives a very lucid description of the methods of uterine displacements, and he concludes his argument by stating that the principles of treatment consist in, 1st restoration of the displacement by the uterine sound, and 2nd, the retention of the parts in their proper position through means mechanically adapted to the parts. This is the gist of the whole matter, and it is this difficulty of mechanical adaptability which meets us in many if not the majority of cases.

The author next proceeds to the consideration of Retroversion of the uterus, and then considers separately Retroflexion, and subsequently both these conditions combined. Retroversion as figured at page 11 is a condition which we have never met with, and fear it is a slight exaggeration on the part of the artist, the anteror and posterior *cul-de-sac* in both instances, is made to reach as high as the fundus of the uterus. For this condition of retroversion the author advises two forms of pessary, the loop and the T. For the purpose of accuracy the author advises after reduction of the deformity by the uterine sound, to measure the distance from the full depth of the posterior cul-de-sac to the edge of the perineum at the outlet, or in other words the length of the posterior vaginal wall, when a loop pessary, one half inch longer than the measurement, and with the curve in the loop corresponding to the cervix will be found to fit accurately. The peculiar feature in Dr. Cutter's pessary is the hook-shaped stem which curves backwards over the perineum, and which is held in position by an elastic band, which passes between the nates and is fastened to a waist-belt opposite the sacrum. Very specific directions are given for the application of these pessaries, and furthermore, directions are given how to properly retain the pessary in position at all times. From pages 42 to 47 there is a liberal amount of what is known as printer's fat, in which the

author gives an extended list of what to eat and what to avoid. This looks odd and somewhat mars the appearance of the book. We next have chapters on Anteversion, Anteflexion, and the combination of these two conditions. The author adapts his loop and T pessary for these conditions, and in some cases finds it necessary to introduce a stem. In the introduction and wearing of the pessary, the necessity for perfect and absolute comfort to the patient is pointed out, without this, the surgeon should seek to remedy the difficulty or change the instrument. After a few words on lateral displacement the author discusses prolapsus, for which condition he employs a cup-shaped support. The author next considers the prevalence of versions and flexions in the unimpregnated state, and he accounts for this prevalence from a variety of circumstances such as dress, poor food, over-work, much standing, going up and down stairs, non-observance of rest during the menstrual period, indolent indulgence or under work. He also points out the danger of neglecting to treat early uterine diseases, and displacements, and after showing how essential woman is to the sterner sex, he concludes with cases which have come under his own observation. In the preface the author protests against some forms of pessary which are called by his name, and in which the essential feature of his invention has been left out. And he states that Messrs. Codman & Shurtleff of Boston, who are his instrument makers, can supply these pessaries. We have read this little book with a good deal of satisfaction, and we can commend it for its thoroughly practical instructions.

Walsh's Physicians' Combined Call-book and Tablet.—From 18 to 18. For sale by J. B. Lippincott & Co., Philadelphia, and Booksellers generally.

We have received from Dr. R. Walsh, of 227, 4½ street, Washington, D.C., a copy of this book. It is to supply a want that is supposed to exist, although we think that the Physician's Visiting List, published by Lindsay & Blakiston, which has been in use for over 25 years is fully up to the mark. This

opinion, honestly expressed, may be regarded as biased, for we confess to the use of the latter work ever since it first made its appearance. In saying this we do not desire to detract from the usefulness and worth of the Call-book and Tablet.

It is an exceedingly neat visiting list, and possesses an advantage in that the date is not filled in, so that it can extend over many months or years, according to the amount of work which the Physician has to perform. The contents consist of an erasible tablet on the inside front cover, a calendar for 1877 and 1878, a table of signs, a table of drops to the fluid drachm, a graduated table for the administration of tr. opii, according to the age of the patient, a table to regulate the doses of medicine for children, a list of abbreviations, poisons and their antidotes, formulæ and doses of medicines for hypodermic injections, the doses of medicines for inhalation, formulæ for suppositories and medicated pessaries, table to ascertain the duration of pregnancy, maximum doses of poisonous medicines, disinfectants, relation of weights and measures, the diagnostic examination of urine, directions for making post mortem examinations, treatment of asphyxia from drowning, &c., list of incompatibles, list of doses of medicines, blanks for visiting patients, giving the name of patients, name of street with number of house and space for one week's attendance, obstetrical engagements, vaccination engagements, nurses' addresses, and blanks for cash receipts. There is a pocket for bills or prescription blanks.

The size of the book is somewhat different to those already in use, being longer, about the usual width, and more compact. Altogether it is a useful visiting list, and contains one feature of importance, blank leaves whereon short notes of cases can be added at pleasure. We freely commend its use to the profession. It is to be had in this city, at the book-store of C. Hill, No. 666 Dorchester street.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Hypodermic Injection of Corrosive Sublimate in Syphilis. — In the *Wiener Med. Wochenschrift*, No. 11. 1876, Von Bamberger states his experience in the treatment of syphilis by the hypodermic injection of corrosive sublimate, and he raises certain objections to this plan of treatment, the chief of which are that the injections are apt to cause intense pain or even give rise to the formation of abscesses. Dr. Lewin, who claims to have originated the method again comes to the fore in its defence.

He says: "During the last 11 years, nearly all the patients suffering from constitutional syphilis, that have come under my care, have been treated by the subcutaneous injection of corrosive sublimate. The average number was about 1,200 or 1,300 per annum, the total for the 11 years being about 1,4000. The average number of injections required was about 25. Of these some 20 suffered from abscess, in consequence of the injections.

These abscesses were never sufficiently serious to confine the patient to bed.

The abscesses will not occur if proper precautions are taken by the person who makes the injection.

It must be admitted the injections are liable to cause violent pain, but this occurs so rarely that it cannot be advanced as a weighty argument against the method. On the other hand, the results of this mode of treatment are, on the whole, so favorable that I do not hesitate to recommend it in all cases. Bamberger himself concedes that their curative effect is surprisingly rapid, and that such is the case the following statistics will abundantly show. These statistics are based upon the reports of the Charité Hospital, and they afford a tolerably correct indication of the amount of syphilis which exists in a certain class of the population of Berlin, and we have been able to observe its course and progress during lengthened periods of time; because the Charité is the only hospital in the city which treats syphilitic

prostitutes, and in addition to this the police regulations are such that prostitutes are seldom treated for any length of time by private practitioners.

In order to form a just estimate of the results of my method of treatment, I have compared the number of syphilitic prostitutes treated in my department since I commenced using the mercurial injection in 1865, up to the present time, with three treated in other ways during a like period before 1865.

The comparison shows not only that the duration of treatment is lessened by the corrosive sublimate injection, but also that relapses (*i. e*, manifestation of constitutional syphilis) are much less frequent. From 1855 to 1865, the average time spent by each patient in the Hospital was 10 weeks, since 1865 it has only been four weeks.

The number of relapses under the old system was about 80 per cent, under the injection plan it was about 40 per cent.

These results also compared exactly with the difference in the number of patients treated in my department before and after the year 1875.

In the year 1855, the inhabitants of Berlin numbered between five and six hundred thousand. The number of syphilitic patients treated daily in the Charité was then 150 to 170. There is now a daily attendance of 100 to 120.

If the increase had been in proportion to that of the population the daily attendance would now be about three hundred.

The severity of the relapses is also much diminished, inasmuch as I have not seen a severe case of constitutional syphilis in a prostitute for a long time, and as far as I can learn from my hospital colleagues there have been no cases of visceral syphilis after the treatment by mercurial subcutaneous injection. It must not, however, be forgotten, that one course of treatment even when continued for many weeks will not secure immunity from relapses, to this end the treatment must be renewed from time to time for one year at least. Neglect of this precaution is apt to be punished after several years have elapsed by an outbreak of severe constitutional syphilis.—Prof. G. Lewin—(*Berliner Klinische Wochenschrift*, No. 45, 1876.)

Treatment of Acute Rheumatism by Salicin.—Before the onset of winter I would again draw the attention of the profession to the beneficial result of salicin in acute rheumatism.

In my original paper on the subject the following conclusions were given as the result of my then experience of the remedy:—"1. We have in salicin a valuable remedy in the treatment of acute rheumatism. 2. The more acute the case, the more marked the benefit produced. 3. In acute cases, its beneficial action is generally apparent within twenty-four, always within forty-eight, hours of its administration in sufficient doses. 4. Given thus at the commencement of the attack, it seems to arrest the course of the malady as effectually as quinine cures an ague or ipecacuanha a dysentery. 5. The relief of pain is always one of the earliest effects produced. 6. In acute cases, relief of pain and a fall of temperature generally occur simultaneously. 7. In sub-acute cases, the pain is sometimes decidedly relieved before the temperature begins to fall; as is frequently observed in those of nervous temperament, the pain is proportionately greater than the abnormal rise of temperature. 8. In chronic rheumatism, salicin sometimes does good where other remedies fail; but it also sometimes fails where others do good."

A further experience of the remedy has confirmed me in the accuracy of these conclusions. In not one case of acute rheumatism have I found salicin fail to produce a speedy cure of the disease. I have therefore nothing to add to, nothing to detract from, the conclusion—"that, given in sufficient dose at the commencement of the attack, salicin seems to arrest the course of acute rheumatism as effectually as quinine cures an ague, or ipecacuanha a dysentery."

The points to which, in this communication, I would direct special attention are: first, the dose which should be given; and, second, the action of the remedy on the cardiac complications of acute rheumatism.

1. *The dose.*—What I said on this point in my former paper was as follows:—The dose of salicin is from ten to thirty grains every two, three, or four hours, according to the severity of the

case. Fifteen grains every three hours is a medium dose for an acute case. It is very possible that less might suffice; for I have not tried to find the minimum dose. It is very certain that a much larger dose may be given without producing discomfort."

Further experience has led me to the conclusion that it is well to give the larger dose; and that the best way to get the full and speedy benefit of the remedy is to saturate the system with it as quickly as possible. The more speedily this is done, the more speedily are the fever and pains subdued. I now, therefore, give the salicin to adults in a dose of twenty to thirty grains every two hours; in very acute cases I give that quantity every hour till pain is relieved. With relief of pain, sleep returns, and the hourly dose cannot be adhered to. But it is well to give twenty grains, at least, every two hours during the day, till the temperature is down to the normal. For a week afterwards the same dose should be given four times a day.

Salicin is an excellent bitter tonic—in my experience as good as quinine, and not apt to disagree as the latter is. I have always found cases of acute rheumatism treated by it convalesce very rapidly; treated in the old way, convalescence from that disease is a slow and tedious process.

I am specially anxious to call attention to the necessity for giving salicin in large and frequently repeated doses, because, in some of the cases which have been reported in the journals since my original paper was published, the dose given was too small to produce benefit. To give "from thirty to sixty grains per day" is to do justice neither to the patient nor the remedy; and to report a case in which such a dose was given as one indicating "the inability of salicin to arrest the disease," is to draw an inference which is unwarranted by the facts, and which tends to throw unmerited discredit on a remedy whose ability to arrest the progress of acute rheumatism has already been demonstrated in numerous cases. A case of acute rheumatism which gets from thirty to sixty grains in twenty four hours—i.e., an average of less than two grains in the hour—receives practically no treatment, and is of no value as evidence either for or against salicin.—*Dr. McLagan, Lancet Oct. 28th.*

Post Partum Hæmorrhage.—Dr. Osterloh. *Ætiology.*—The great cause of this hæmorrhage is the incomplete contraction of the uterus. After labour the uterus feels soft and large instead of hard and round. Among 289 cases of incomplete contraction of the uterus, 150 occurred in primiparæ. The age of the primipara has no effect in the hæmorrhage. Injury or tearing of the uterus is observed more in the abnormally rapid, or very protracted labour, in cases where the liquor amnii is deficient, and where the child is large. Sometimes the contraction of the uterus is retarded by some of the membranes, or part of the placenta remaining in the uterus, contraction may be also hindered by a full bladder; in these cases the removal of the causes produces contraction and cessation of the bleeding. In 69 of these 289 cases the labours were of long duration. Forceps were applied in 8.6 per cent.

The second great cause of hæmorrhage is due to injury of the soft parts from rigidity of the passages, &c., or as the result of an operation. In 20 cases hæmorrhage due to injury was observed, one case of rupture of the walls of the uterus, one case of tearing of the cervix, four cases of tearing of the vagina, and fourteen cases of tearing of the vulva. There were 153 cases of late bleeding from the first to the eighth day or later, due to tardy involution of the uterus. Several of the cases were due to previous severe flooding, and slight after contraction of the uterus; in other cases, it was due indirectly to retention of membranes, or part of placenta, inflammation of the mucous membrane of the uterus, &c. In many cases the reason of the bleeding was not apparent.

Symptoms.—Among the local symptoms the condition of the uterus is most important. If the uterus the day after labour is painful on movement and very hard to the feel, this condition is probably due to blood clot or retained membranes.

The *Diagnosis* is not so difficult if one carefully examines the body and passages. If blood comes from the uterus it would of course be on the plug, and by means of the speculum the bleeding point may be easily made out.

The *Prognosis* of hæmorrhage is generally favorable, only in one case did death occur, and this on the eleventh day; it was

due to ruptured uterus. In 57 cases out of 307, where the hæmorrhage had ceased, other diseases remained; 13 had parametritis, and 37 endometritis. They all recovered.

Treatment.—In most cases where there is rupture of the vulva, vagina or external orifice, a plug soaked in vinegar and water was found sufficient to stop the hæmorrhage. In one case of tearing of the neck of the womb, a tampon soaked in liquor ferri perchloridi was used. One must endeavour always to prevent the possibility of bleeding, (*a*) by avoiding terminating labour by artificial means, especially in simple cases of labour; (*b*) by complete removal of placenta by the method of expression; (*c*) by using ergotin hypodermically in cases of exhausted uterus or inertia of the uterus; salicylic acid (1 to 400) has also been found useful hypodermically. If bleeding continues after emptying the bladder, taking away clots, &c., and using pressure on the uterus, then use subcutaneous injections of ergotin. Ergotin was injected in 230 cases of this kind with favorable results. When ergotin has no effect inject vinegar and water in a strong stream *into* the uterus. In cases where ergotin had no effect, (50) liquor ferri perchl. and water (equal parts) were injected into the uterus. Dr. Osterloh says no ill effects follow the use of the liquor ferri perchl., and that he can recommend it as an injection.

Injection of chloride of lime was employed in 10 cases, hypermanganate of potash in 74, and salicylic acid in 12. Carbolic acid and benzoic acid were also used, and all with good effect.

In cases of late hæmorrhage the cold douche and astringents were used, also hypermanganate of potash, later salicylic acid, (1 to 600), and in severe cases, liq. ferri perchl. was used; where there were placental polyps, these were immediately removed In cases of threatening anæmia, the subcutaneous injection of sulphuric ether is recommended. If there is a high pulse after hæmorrhage use digitalin subcutaneously (1 mgrmm.) two or three times. Every obstetrician should carry with him a solution of ergotin, a hypodermic syringe, liquor ferri perchl., and a Winckel ball-syringe.—(Deutsche Ztschr. f. pr. Med. 11. p. 119, 1876. quoted in Schmidt's Jahrbücher, band 170, Hft. 3.)

Poisoning by Digitalis.—Two young men wishing to escape conscription, obtained a large number of pills from a person who professed to be able to exempt recruits from military service, with instructions to take 2 to 4 pills daily for eight or ten days before their enrolment. One of them reported himself ill three days after entering the service, six days later he was sent to hospital, where he died quite suddenly and unexpectedly after three weeks' illness.

A careful investigation of the case elicited the following facts:

The post mortem revealed no pathological change sufficient to account for death. The blood was thin and fluid, of a cherry-red colour, and without a trace of coagulum. There were ecchymoses in the coats of the stomach and intestines, and the brain was anæmic.

A chemical examination of portions of the œsophagus stomach, duodenum, and liver, gave the reaction of digitalin most decidedly; that of the blood contained in the right ventricle was negative.

The pills were found to contain pulv. fol. digit. purp. gr $1\frac{1}{2}$ in each. It appeared that the unfortunate young man had taken 137 pills, or upwards of 200 grains of digitalis within five weeks, and he probably died in consequence of the cumulative action of the drug.

The symptoms presented during life were pains in the stomach, loss of appetite, nausea, constipation, pain in the head and giddiness. The patient, morever, looked very ill. The pulse was 50 to 52 per minute, the temperature normal. The odour of the breath was peculiar, and on one occasion some greenish material was vomited.

In addition to this there was dimness of vision, tinnitus, and great debility. The pupils were alike and acted well. The skin was pale and sallow.

Death occurred suddenly whilst the patient was being raised up in bed by one of the attendants. The day before he had a sudden and severe attack of syncope. The other recruit suffered in a similar manner, but recovered, having taken only 75 pills in the four or five weeks.—(Dr. Könrad Kühnhorn, Vierteljahrschrift f. gerichtl. Medizin, April, 1876.

Ergot in Purpura.—The following summary is given by Dr. Buckley in a paper on the subject in the last number of the Practitioner, (Nov.):—

I. The treatment of purpura, as advised in the books, is ineffective and tedious in lighter cases, and insufficient to save life in many of the severer or hæmorrhagic cases.

II. Ergot possesses a very decided power in contracting the involuntary muscular fibres, causes divided arteries to contract, acts upon the smaller arteries and capillaries, and has been proved a valuable arrester of hæmorrhage in many affections.

III. In purpura the action of ergot is very manifest, causing, when given in sufficient doses, an almost, if not quite, immediate cessation of the cutaneous and other hæmorrhages.

IV. The most effective method of administration of ergot is by hypodermic injection, and this means renders it peculiarly valuable in purpura hæmorrhagica, where there is hæmatemesis, so that its administration by the mouth would be impossible, or in cases where the stomach would not tolerate it.

V. While ergotin, a purified watery extract, has been advised by many, and has been found to act efficiently in many cases, its action is liable to be uncertain by reason of age or faulty preparation, and after dilution with water it soon becomes inert.

VI. Fluid extract of ergot may be administered hypodermically, undiluted, and without local accident, as abscess or inflammation, if care be exercised; and its effect is very prompt and certain.

VII. Ergot may be thrown under the skin in any part of the body; the gluteal and shoulder regions answer well, but the places to be preferred are about the pectoral muscles or at the sides of the chest, about half way down.

VIII. Severe cases of purpura require the frequent repetition, even of very large doses, whether by the mouth or by hypodermic injection; both methods may be combined.

IX. Generally one or two grains of ergotin or from ten to fifteen minims of the fluid extract, hypodermically, once or twice a day are sufficient, but the former may safely be increased.

to five grains, and the latter to twenty or thirty minims, and repeated as often as every hour and a half.

X. Larger doses relatively are required when given by the mouth, and their action thus given, is more slow.

XI. No fear need be entertained of any untoward effects; an ounce of fluid extract by the mouth, and seven grains of ergotin, hypodermically, have failed to give rise to any unpleasant symptoms; and from half a drachm to a drachm and a half of the tincture or fluid extract have been continued for several months without producing ergotism.

XII. Other preparations of ergot may be employed internally, —as the powder, solid extract, wine—or infusion, the dose veing proportioned to the effect required and produced.

Volvulus and Ileus — Cured by Effervescing Clysters.—A servant girl, æt. 22, was suddenly seized with an abdominal affection which presented the usual symptoms of internal incarceration, and in the right hypochondrium, a short distance above the crest of the ilium, a movable tumour about 3 inches long, and 1½ inches wide, could be easily detected by palpation. After several unsuccessful attempts had been made to move the bowels with purgative medicines, eight effervescing enemata were administered at short intervals; each consisted of half an ounce of bicarbonate of soda dissolved in a pint of water, followed immediately by three drachms of tartaric acid in an equal quantity of water.

It is not stated whether any of the fluid of each injection, or of the gas generated by the soda and tartaric acid, escaped per rectum during the short intervals mentioned, if not the patient's condition must have been somewhat precarious; for after the first clyster, she is said to have felt as if something had burst in the abdomen. The eighth injection was followed by several copious and offensive stools, and the symptoms of incarceration vanished.—(Dr. S. Adler, Med. Chirurg. Centralblatt, 15. 1876).

Number of White Blood Globules.—M. Grancher communicated the results of his researches into the physiological number of the white globules in the adult to the Société de Biologie (*Le Mouvement Médical*). The results he obtained differ from what have been given up to the present time. Almost all physiologists say there is one white to every four or five hundred red globules; but M. Grancher finds that the proportion is much lower, one to every fifteen or eighteen hundred. He also found, contrary to what is generally accepted that food does not augment the number of white globules, but that their number remains much the same during the entire day. The normal oscillations are much greater for white than red globules, so that the number of red globules in different healthy persons varies between five and six millions, and the number of white globules between three and nine thousand. M. Malassez's researches led him to find a smaller proportion of white globules than what is usually accepted, but nevertheless greater than that found by M. Grancher.—*Doctor.*

The Magnet in cases of Broken Needles.—A son of Sir B. Brodie broke a needle in his calf. The magnet was employed, and it was easy to show its position. It did not make any change of position. It being resolved not to disturb it, the lad ran about, and in time the needle passed to the other side of the leg, its travels being shown by the magnet. At length it came close under the skin and was extracted. This case being reported, Mr. B. Carter referred to Dr. McKeown's paper on the diagnosis of pieces of iron in the eye, and said that in one case a fragment was removed by the power of the magnet. Sir J. Paget had heard of powerful magnets being kept in large foundries for this very purpose; and Mr. Savory said Mr. Smee published a paper on the detection of the presence of needles by the magnet more than thirty years ago. This seems likely, for the practice is really very old. Indeed, at the meeting it was remarked that Fabricius Hildanus alluded to it.—*Royal Med. Chir. Society. Doctor.*

Enteric Fever.—Beef Tea *v.* Milk: Hæmorrhage.—"In a case, now at the fourteenth day, there is looseness of the bowels. On examining the stool, I find a separate undigested curd of milk. This curd has acted as an irritant and induced the diarrhœa, therefore you must thin the milk, and replace it more or less by beef-tea. It has been too much the fashion to give much milk without due regard to its digestion As remedies, you may give some starch with bismuth in enema." At the next visit, some hæmorrhage (of which the patient was kept in ignorance) was reported by the nurse. On inspection, it was found to be about half a pint of dark fluid blood, "Now, the most important point is, that this patient did not sit up for any purpose. A case which occurred during my student days impressed me very much. He had hæmorrhage like this, but did not seem very bad; his pulse was 84; his mind clear; he was allowed to rise to the night-stool: the hæmorrhage recurred, and ended fatally in a few minutes. A mesenteric artery had been opened. You must then by position, take off the weight of the blood-column. Omit milk altogether, the curd might irritate; give beef-tea and arrowroot; a little softened bread; a little brandy, two drachms every three or four hours, to improve the nerve-tone; give him three grains of the acetate of lead with acetic acid every four hours, and an opiate enema night and morning. Observe there is no great distension of abdomen, and there is no tremor. I conclude the ulceration is not deep. *When tremor is disproportionate to other nerve symptoms, it indicates more depth of ulceration.* The patient did well.—Sir W. Jenner, Bart., in *British Medical Journal*, *Oct*, 28.

Personal.

A. D. Blackader, B A., M.D., ('71), has been appointed one of the resident Clinical Assistants at the Consumption Hospital, Brompton, London.

W. T. Ward, M.D., ('73), and R. L. Macdonnell, M.D., ('76), have passed the primary examination at the Royal College of Surgeons, England.

F. S. Sneider, M.D., ('76), has commenced practice in Simcoe, Ont.

CANADA

Medical and Surgical Journal.

MONTREAL, DECEMBER, 1876.

SMALL-POX AND VACCINATION.

A very excellent and carefully prepared paper was on a recent occasion read before the Board of Health of the city of Montreal, by His Worship the Mayor, Dr. Hingston, and some very practical suggestions were made touching the subject of vaccination, and also refuting the very dangerous and distorted statements which have been so freely and unblushingly circulated by the anti-vaccinators, of whom there are amongst us a goodly number. Interesting and practical lessons are to be learnt by a careful comparison of the statistics of the disease small-pox, one year with another, and one period of epidemic of that disease with another. These practical points are brought out with greater prominence in those countries where accurate and reliable statistics are obtainable. In the report of Dr. Seaton, the Medical Officer of the Local Government Board of London, England, which appears in Mr. Simon's Annual Report for 1874, some very instructive facts are brought out, which demand careful scrutiny. From this report it would appear that the epidemic of small-pox during the years 1871 and 1872, was a general and wide-spread epidemic of that disease. It was not confined to the continent of Europe and the British Isles, but was largely diffused, and we can call to mind the virulence and intensity, the malignancy and fatality of that epidemic in our own country. The disease attacked indiscriminately those who were supposed to be protected against it by vaccination as well as the absolutely unprotected. These facts very seriously

affected the generally admitted protective influence of vaccination, and gave rise to popular clamour against the practice of vaccination, confined, however, to that portion of the community who are always willing to endorse the views of a few leaders amongst them. Furthermore, there are with us, as well as in other countries, a sect of peculiar people, fearless as to results, who will expose themselves, their children and the community generally to the spread of the contagion of the disease small-pox. We have known of instances where parents have taken their children to a neighbour's house, where a mild case of small-pox existed, and have even placed their children to sleep in the same bed with the sick patient if peradventure they may be equally fortunate and pass through the disease in a modified form. Of course the absurdity of this practice needs no elucidation at our hands. The fear of the disease does not exist in a large proportion of our community. Referring again to the report of Dr. Seaton as touching the efficacy of vaccination, he shows that in the metropolis the annual mortality of small-pox before the introduction of vaccination ranged from 400 to 500 per 100,000 of the inhabitants. Since the introduction of vaccination the mortality from small-pox has greatly diminished, taking a period of twenty years from 1854 to 1873, which includes the epidemic of 1871 and 1872, the annual death-rate was reduced to decimal 24 per 1000, or in other words that out of every 100,000 inhabitants 24 persons only died of the disease. This difference in the mortality was so very remarkable, that there were those who suggested that the diminution depended not solely on the protective influence of vaccination, but on a gradual lessening in intensity of the disease, as also a lessening of its diffusion. This however has been proved to be erroneous, the experience of 1871 and 1872 showed conclusively that small-pox had lost none of its intensity and fatality. But although the epidemic was acknowledged to be unusually severe, the number of deaths amounted to 148 per 100,000 of the inhabitants. Thus under many most unfavorable circumstances, the death-rate from small-pox, during the most severe epidemic of this century, rose to less than one half of what it yielded

prior to the introduction of vaccination. There must be some good reason for this difference, and to the protective of influence of vaccination with the enforcement of wise laws for isolation of the infected, can alone, this remarkable difference be attributed.

This practical lesson, therefore, is taught by the epedimic of small-pox which visited London during the years 1871 and 1872. But other most remarkable facts are elucidated in connection with that epidemic. Persons in constant attendance on the sick, at the small-pox hospitals, were, as a rule, re-vaccinated, and in no single instance did the disease attack those who had been efficiently re-vaccinated, although the number exposed were some 300. and they were in constant association with the sick. This observation can be easily confirmed, as there is hardly a medical man of any experience in this country, or any other country, who could not bear similar testimony. Now this leads to the admission of the value of re-vaccination more especially during the prevalence of epidemic small-pox. Re-vaccination was very generally practised in London during the epidemic of 1871 and 1872, and as a result the disease in the metropolis was absolutely stamped out. This salutary effect followed isolation, enlarged hospital provision, and a very general adult re-vaccination . These lessons therefore, we can with propriety apply in the present instance in this country wherein small-pox is epidemic. Careful, energetic and general re vaccination should be practised, and very serious responsibility rests on the Health Authorities in this particular. From the published reports of Dr. Buchanan, taking the experience of London, Birmingham, and other large towns in England it would appear, that large hospital accommodation affording the means of isolating cases of the disease at the commencement of an outbreak, exerts a most important influence on the subsequent course and spread of the disease.

If, as a community, we are desirous of improving our sanitary state as regards this disease ; if we are earnest in wishing to stamp out this disease since its existence amongst us has such a baneful effect on our trade ; if it is deemed advisable to rid ourselves of the injurious character of a plague-stricken city ;

then should we take advantage of the experience to be gained from observations in other large cities, and adopt common-sense measures. Liberal and ample hospital accommodation will afford means for isolation of those already suffering from the disease, and again, a thorough system of adult and infant vaccination will act as a protection against the invasion of the disease. We are aware that the city has gone to much expense in providing hospital accommodation; and furthermore that public vaccinators are at work engaged in a general system of vaccination and re-vaccination, and we may without hesitation predict that if isolation is thoroughly practised, and vaccination carefully and efficiently performed, there will be noticed a marked subsidence of the present epidemic if not its total extinction.

PRODROMIC RASHES OF SMALL-POX.

We publish in our present number a very good article by Dr. Osler of McGill University, upon the Prodromic Rashes of Small-pox. The writer has had peculiar advantages for the observation of numerous examples of these eruptions owing to his having held for some time the position of visiting physician to the small-pox wards of the Montreal General Hospital during a period of epidemic visitation of the disease in this city. Although, unfortunately for science, not now possessing any similar advantages, owing to the transference of all these patients to the care of the city and its public officers, yet Dr. Osler appears to have made such good use of his time that he is enabled to present us with the records of several cases serving to illustrate antecedent or prodromic rashes. It is remarkable how almost entirely descriptions of these eruptions preceding the development of the papules proper of variola are wanting from our ordinary English text-books and standard works of reference. The natural result of this is that a great deal of misapprehension has existed, and does indeed still exist with many as regards the diagnostic value and prognostic significance of these appearances. We have several times known the devel-

opment of a purpuric rash during the primary fever of an attack of variola lead the practitioner to give expression to most grave apprehensions as to the expected severity of the subsequent attack, which have happily been entirely dissipated by the favorable course the case has followed throughout. We have ourselves been fortunate enough to have observed a very large number of small-pox cases during several epidemics of late years and through experience (and by that means alone,) had already learned the truth of several of the statements advanced by the writer of this paper. But we must remember that a very large proportion of our medical men (fortunately indeed for the country), see very few cases of small pox; in fact often pass years without seeing a single one, so that anything which they may learn from others which is of practical value in understanding the disease becomes doubly useful The same is equally true with reference to students. From the nature of the case it is hardly ever possible for any of them to study small-pox as they do every other disease in the hospital wards. Thus many are obliged to go into practice at first without ever having seen a case of small-pox If then he trust to the ordinary description to guide him to a correct diagnosis, he will certainly soon experience annoying trouble from the casual occurrence of some of these (unless known) very puzzling prodromic rashes. We have several times been consulted by young practitioners under these circumstances and besides have occasionally been the means of entirely modifying the diagnosis of other and older men by referring to the facts known of the significance of these rashes. We have been pleased to know that Dr. Osler has promised to contribute another article on the hæmorrhagic varieties of small-pox before the Medico-Chirurgical Society at another meeting.

We are pleased to see in the Edinburgh Medical Journal for October, a short article upon Litholysis by our friend Dr. George C. Duncan. It is a subject which first engaged the attention of his brother, Dr. John Duncan, who graduated at

McGill University in 1871, and who, unfortunately, died before he could carry out his plans. Dr. Duncan possesses, we are sure, the necessary ingenuity and mechanical skill for the accomplishment of his task, for we remember with pleasure the ingeniously contrived Sphygmograph,—made altogether by himself and without a model—which accompanied his graduation Thesis on the subject. Details are promised shortly, when we hope to lay them before our readers.

Two Private Medical Schools have been started in London this autumn session, one by Mr Cooke, a well known teacher, and author of the "Tablets of Anatomy," and "Physiology," the other by Mr. Pearson. The former professes to be largely preparatory in character, a school where a beginner may spend three months working at Anatomy and Physiology before attaching himself to one of the larger Colleges, and, in this way, obtain some knowledge of medical work, and judge of his fitness for the Profession. If this could be carried out in the case of each student it would be an admirable plan. Both of these schools will be taken advantage of by the large class of students who find a few months before the examinations that something more than mere attendance at lectures is needed to master the necessary requirements, and to whom the Tutorial personal instruction will be invaluable.

Dr. McKendrick, formerly the late Dr. Bennett's Physiological assistant, has been appointed to the chair of Physiology in Glasgow University. Dr. Andrew Smart succeeds him as Lecturer on Physiology in the extra-mural school of Edinburgh.

The Chair of Medicine in Edinburgh University, vacated by the death of Dr. Laycock, has been filled by the appointment of Dr. Grainger Stewart, one of the Physicians to the Royal Infirmary and Lecturer on Clinical Medicine. The appointment is one which will give great satisfaction in Edinburgh, more so than to the Profession at large, with whom Dr. Gairdner of Glasgow, one of the candidates, was deservedly the favorite.

We have just received from the Queen's Printer, Quebec, as we go to press (29th November) a number of copies of the Bill of Amendments to the present act as adopted, by the Board of Governors of the College of Physicians and Surgeons, L C., at the last semi-annual meeting of that body held in the city of Quebec, on Wednesday the 27th day of September ult. These shall, without further delay, be circulated amongst the profession, and we must in explanation observe that the delay has been entirely the fault of the printer. The profession should be informed that there are two bills before the Legislature, one the expression of the Medical Society, Montreal. That body has, without reference to the College, and absolutely ignoring its existence, prepared a bill which has been introduced into the Local Legislature by the Hon. Mr. Chapleau. The College bill, which possesses at least the merit of hailing from a recognized body, one in the possession of corporate rites is the bill which we refer to above. A petition to the Legislature is in course of signature. printed copies of which have been very generally circulated. The object of this petition is to strengthen the Board of Governors of the College in its demand for legislative amendment to the act under which it is governed. Those of our friends who have not already replied to the circular letter addressed to them with a copy of the petition enclosed, are earnestly requested to do so without delay.

We have received from Alderman McCord the following interesting figures with reference to the death-rate at the Civic Small-pox Hospitals from Nov. 7th, 1874 to Nov. 1st, 1876.

Protestant Hospital.—Total number received, 168. Died, 34. = 20.23 per cent. There were 54 unvaccinated, and of these 25 died : = 46.29 per cent. There were 114 vaccinated, of these 9 died : = 7.89 per cent.

Catholic Hospital.—Total number received 396. Died 127 : = 32.07 per cent. There were 165 unvaccinated, of these 89 died : = 53.93 per cent. There 231 vaccinated, of these 38 died : = 16.45 per cent.

In both Hospitals, 564 Received. Died, 161,28=.54 per ct.
Unvaccinated, received 219, Died, 117 : = 53.42 per cent.
Vaccinated, received 345. Died 47 = 13.62 per cent.

Personal.—Dr. Edmund Robillard of Montreal sailed for Europe via New York on the 15th of November, ult. We believe it is the intention of Dr. Robillard to pass the winter on the continent, between Paris and Vienna, and he expects to return to Canada towards the end of next summer.

CANADA
MEDICAL & SURGICAL JOURNAL

Original Communications.

HÆMORRHAGIC SMALL-POX.

By William Osler, M.D., L.R.C.P., Lond.

Fellow of the Royal Microscopical Society, London, late Physician to the Small-pox Department of the Montreal General Hospital, and Professor of the Institutes of Medicine, McGill University.

True hæmorrhagic small-pox occurs under two conditions; in one the characteristic symptoms come on early, either with or following close upon the prodromata; there are extensive cutaneous extravasations, with hæmorrhages from the mucous surfaces, and death ensues with a terrible certainty in from two to six days. This is the *purpura variolosa* of authors, the petechial, malignant, or black small-pox. In the other, the case progresses as one of variola vera, and it is not until the vesicular or pustular stage that hæmorrhage takes place into the pocks, and in some cases from the mucous membranes. This, which is almost as invariably fatal as the former, has been called by some writers, *variola hæmorrhagica pustulosa*, indicating that the hæmorrhages occur at a later period of the disease.

The epidemic which has raged in this city for the past five years has been remarkable for the prevalence of this variety of the disease; and the present paper is based on 27 cases, 14 of which came under my own observation, chiefly at the General Hospital, while the remaining 13 were under the care of my predecessor, Dr. Simpson, to whose kindness I am indebted for

permission to utilize them. The clinical history of the disease is well exemplified in the reports of the following cases.

I.—A. T., aged 6½, unvaccinated. Admitted at 2 p.m., July 14th. Had been ill since the afternoon of Monday, the 10th, with fever, severe pains in the back and head, and vomiting.

Patient seen at 8.40 p.m. Pulse 144, tolerably firm; temperature 105°; respirations 26, the rhythm broken by an occasional deep inspiration, or a series of shorter ones. Pupils dilated. Slight delirium. Tongue thickly coated, white, edges red. General cutaneous surface of a dusky red colour, especially marked in the face, and by careful inspection an exceedingly fine papular eruption was discovered, most evident on the face, less so in other parts. Scattered over the whole skin were numerous ecchymoses, from 1 to 3 lines in diameter, and of a dark red colour. They were most abundant about the neck, in the submaxillary regions, scattered on the extremities. A thickly-set group existed over the left biceps. Ordered quinine gr. x, at 9.30. Very restless all night, raving and shouting; temperature at 3 a.m., 104.1°, and at this time he had a second ten grains of quinine, shortly after the administration of which he vomited a little blood.

15*th*.—9.15 a.m. Pulse 140, not so full; temperature 104°; respirations 18, and still irregular. Is sensible, but will not take nourishment. Ordered a cold pack. At 12 a.m., temperature 103°. 5.30 p.m. Pulse 144; temperature 104.2°; respirations 32. On the back are many elevated wheals, and on the summit of these small groups of vesicles exist. The fine punctiform extravasations are almost universal on the skin of the trunk. Lips dry and cracked. Tongue darkly coated. Does not complain of his throat. Ordered a cold pack at 6 p.m., and quinine gr. x, at 9 p.m. To have morphia if sleepless.

16*th*.—Has been very restless all night, in spite of two draughts of morphia (¼ gr. each). Pulse 140, weak but regular; temperature 103.2°; respirations 18, more regular Great restlessness and jactitation. The scattered papules are uniformly hæmorrhagic, and the wheals on the back and side,

which yesterday were only hyperæmic, are now purpuric. At least one half of the cutaneous surface is the seat of extravasation and the free portions are of a dusky-red colour. Purpuric spots numerous about the face, and a few exist beneath the conjunctiva. The urine passed through the night is clear, though scanty. Has passed a considerable amount of blood per rectum, and also a small quantity of bloody urine. Surface of body darker, extravasations appear deeper and more abundant; on exposing the trunk, nothing is noticeable on the skin but the deep plum colour. Restlessness extreme, and slight delirium.

According to the nurse he became easier after 3 p.m., passed more blood from the bowels and bladder, and died at 5.30 p.m., having been in hospital a little over two days. Duration of illness about six days.

The above may be taken as a fair example of the disease in question, but it may occur in a more aggravated form, killing in from three to four days, and before the eruption has become at all evident.

One of the worst cases which came under my notice was of this description, and, as I saw it very frequently from the beginning to the close, I will give a short account of it.

II. On the evening of Thursday, Oct. 24th, 1874, I was sent for to see A. N., aged 22, a stout, well-built, young Englishman. I found him in a high fever, complaining of intense pain in the lumbar and præcordial regions, and incessant vomiting. He stated that he had been to the theatre the previous night feeling in his usual health, but that on awaking this morning he felt unwell, had a headache and nausea, and was unable to attend to his business. He believed it to be biliousness, to attacks of which he was, at times, subject. On the left arm were two scars of an old vaccination.

25*th*, 9 a.m. — Found him in the same condition, having passed a very bad night. The vomiting and pains continue. Temperature 101°; pulse 116, full and strong; face flushed, skin of chest erythematous. The præcordial pain was specially

grievous, and I gave him an injection of ½ a gr. of morphia in this region.

12 a.m. — Is a little easier, but the retching continues.

4. 15, p m.—Skin of the trunk very hyperæmic, and a few isolated ecchymoses were noticed along the lower margins of the chest.

9. p.m.—Scattered spots of purpura exist also in the groins. Condition much the same, retching not quite so frequent. Pulse 112; temperature 102.4°.

26*th.*—Passed a restless, uneasy, night. Skin of trunk much congested, that of extremities less so. Ecchymoses have extended, and are more numerous. In consultation with Dr. Howard in the afternoon, my suspicions were confirmed, and the diagnosis of small-pox made. On careful inspection a few small papules were discovered upon the wrists and forehead, near the roots of the hair. Still complains of the dull, aching pain in the back, and the vomiting continues every 15 or 20 minutes. In the evening he was removed to the small-pox wards of the General Hospital, and placed under the care of Dr. Simpson. Shortly after arriving there he vomited a little blood. 9. p.m.—The skin of the trunk is now almost universally purpuric, and the extravasations are extending on the extremities. Pulse 124, soft and compressible; respirations 26, interrupted, every fifth or sixth inspiration deeper than the others. Complains a little of his throat; soreness due probably to the constant retching. Still complains of the dorsal pains. A hypodermic injection of morphia was given in the lumbar region.

27*th.*—Passed a restless night. Hæmaturia and melæna towards morning. Hæmatemesis at intervals. Considerable oozing took place from the puncture of the hypodermic needle. General symptoms a little improved. The lumbar pains much relieved. Cutaneous hæmorrhages are extending on the extremities. Pulse 140, and small; respirations 34; temperature 100.2°. Hæmorrhages from the bowels, stomach, and urinary passages continued through the day, and the symptoms became aggravated. 6 p m.—Pulse 140, and

almost imperceptible; respirations between 40 and 50, and interrupted. The mind, which up to this time had remained clear, now began to wander. The greater part of the skin of the body is ecchymotic. The face is somewhat swollen, dark purplish red in colour, and on pressing with the finger it is seen that colouration is due chiefly to the extravasations, which have also occurred round the orbits. The conjunctivæ are swollen and black, hæmorrhage having taken place beneath them; the corneæ appear sunk in dark red pits, giving to the patient a frightful appearance. The whole trunk is of a deep plum colour, hardly a trace of clear cuticle remains. The purpuric spots are thickly set, and between them are fine punctiform extravasations. On the extremities the petechial eruption is more scattered; still, even here, more than two-thirds of the cutaneous surface is the seat of hæmorrhage, and the whole skin is hyperæmic. The most careful inspection fails to detect any papules, even about the wrists or forehead, where on Friday evening they were appearing.

Just after midnight the respirations became more prolonged, pulse quite imperceptible, extremities cold, and death took place at 12.45 a.m., on Monday morning. The whole illness lasted hardly four days.

With the exception of two, all the cases of hæmorrhagic small-pox which I have observed were of the above type—the patients died before the characteristic eruption developed, or the cutaneous ecchymoses completely cloaked it. In two instances the extravasations did not come on in the initial stage, but during the development of the pocks.—*V. hæmorrhagica pustulosa.*

The following is a brief history of one of these cases:

III. A. McR., aged 19, a well-built Scotch girl, unvaccinated. Admitted January 31st, 1875, from the general wards, where she had been under treatment during two weeks for some ill-defined affection. Only six weeks previous to this she had been discharged from the Hospital convalescent from typhoid fever. In the general wards she had suffered with the usual initial symptoms of the disease. On admission, temperature 103.3°;

pulse 116; respirations 22. A deep erythematous rash exists over the whole body, most intense on the abdomen and thorax, unaccompanied by ecchymoses. A papular eruption is present on the face, thorax, and arms, and is just appearing on the legs. Patient dull, heavy, and does not respond to questions.

Feb. 1*st.*—9 a.m.—Temperature 102°; pulse 110; respirations 26. Has passed a restless night; delirious at times, vomiting continues at intervals. Erythema persists. 6. p.m. Pulse 112; respirations 32; temperature 103.4°. Towards the afternoon the nurse states that a small amount of blood was vomited, and she also passed a little from the bladder and bowels. The eruption has extended, many of the papules have now vesicular tops. The erythema is not nearly so bright.

2*nd.*, 9 a.m. — Temperature 102.3°; pulse 100; respirations 26. The hæmatemesis has continued at intervals through the night. Slight hæmaturia. The bright erythematous rash has gone, the skin is now of a dusky livid hue. 6. p.m. Temperature 103.4°; pulse 60, and intermittent every fourth beat, but is tolerably full; respirations 28. Cutaneous extravasations noticed for the first time, chiefly about the vesicles on the upper part of the chest, and on the legs. In many the hæmorrhage has occurred into the vesicles. The hæmorrhages from the mucous membranes have continued at intervals.

3*rd*, 8.30 a.m.—Temperature, 101°; pulse, 112; respirations, 24. Most of the vesicles on the legs are now hæmorrhagic, and the ecchymoses have extended in the abdominal region. The vomiting is still a very troublesome symptom. 5.30 p.m.—Pulse, 120, not irregular; temperature, 102°; respirations, 24. On the face and arms the pocks are developing slowly, and only a few in these parts are hæmorrhagic; melæna, hæmaturia and metrorrhagia (slight). Takes nourishment well.

4*th*, 9. a.m.—Pulse, 120; temperature, 101.2°; respirations, 28; says she feels better; vomiting has stopped. Blood in the urine passed through the night. Pocks are not developing, look dark, and the majority of them are hæmorrhagic.

6. p.m.—Pulse, 124; temperature, 102°; respirations. 36. The peculiar variolous odour very evident this evening.

5th, 8.30 a.m.—Pulse 116; temperature, 100°; respirations, 18. Slept well, and says she feels much better. Melæna and hæmaturia through the night. Pocks much flattened at the top, and of a dark colour; skin between them livid, and covered with minute extravasations. 6 p.m. Pulse, 112, very weak and intermits every tenth beat; temperature, 101°. Is very dull and heavy, and does not care to take nourishment. Not much change noticed in the eruption, the majority of the pocks look like elevated hæmorrhagic papules, no umbilication in any of them. Through the evening she lost a good deal of blood from the vagina, got much worse towards morning, and died at 7 a.m., on the 9th day of the disease.

The details of the above cases furnish a tolerably accurate picture of the clinical features of this truly terrible disease, and I shall now proceed to make some general remarks upon its symptoms, diagnosis, etiology and pathology.

Symptoms—Satisfactory evidence is wanting as to the period of incubation in hæmorrhagic small-pox. Most writers state that it is the same as in the ordinary form, *i. e.*, 12 to 14 days. Zulzer,* however, states that it is shorter, having determined it in 9 cases to be from 6 to 8 days. In the majority of instances it is unaccompanied by any symptoms—perhaps slight languor and malaise—the disease breaking out suddenly in all its violence. So it was in the case above reported of the young Englishman. The day before the attack he had walked round the mountain, (5 miles).

The symptoms of the initial stage are those of the pustular form; indeed, the disease may be regarded as an intensified and prolonged initial stage, combined with a remarkable tendency to cutaneous and mucous hæmorrhages.

The fever, pain in the back, and vomiting—that triple combination, which we look upon as almost pathognomonic of small-pox—are the prominent symptoms throughout, even after the characteristic extravasations appear.

* Berliner klinische Wochenschrift, 1872.

The fever is usually moderate, varying from 101° to 103°; only once did I observe a temperature of 105°. It is frequently ushered in with a rigor, or series of chills. The pain in the back is perhaps the most distressing symptom to the patient, and persists longer, and is more constant, in this than in the pustular form of the disease, continuing in some instances to within 12 hours of death. All of my patients complained of it, and when asked to localize it placed the hand over the sacrum. Præcordial pain was also common, in one or two cases much more severe than the dorsal. Headache is rarely absent during the first days of the fever.

Vomiting constitutes a very troublesome symptom, and, in my experience, proves exceedingly obstinate, much more so than in ordinary small-pox. It was very unusual for patients with the latter disease to vomit after the appearance of the eruption, while, in cases of the hæmorrhagic form, it continued for 3, 4, and 5 days. Dry retching was frequently combined with it, and seemed particularly distressing.

Early on the second day, or even in the most severe cases on the evening of the first, a bright scarlatiniform redness spreads over the skin of the trunk, sometimes extending to the extremities, but not often involving the face. In some instances this is not universal, but confined to the lower abdominal or lateral thoracic regions. It is difficult, or even impossible, to distinguish this general or localized erythema preceding hæmorrhagic small-pox from the similar condition which, as an initial rash, so frequently ushers in the ordinary or modified forms of the disease. For a time simply hyperæmic and disappearing on pressure, the character of the rash quickly alters by the occurrence of numerous extravasations, which begin commonly in the groins and lateral thoracic areas. At first punctiform or macular, and concealed by the general redness, they soon increase in size, and on the trunk form irregular patches, ranging in size from a six-pence to a penny, while on the extremities and face they remain discrete. In 36 hours the ecchymoses may have developed to such an extent as to involve fully two-thirds of the cutaneous surface. The skin of the trunk is now of a rich plum

colour, and by pressure very slight difference is made in the intensity. Hæmorrhage into the tissue of the eyelids and beneath the conjunctivæ is common, and adds greatly to the disfigurement of the face, already puffed and swollen. The extravasations deepen until the end, forming throughout the most distinguishing feature, and the one which has so justly given the name of black small-pox to this variety of the disease.

True papules of variola may nearly always be discovered, if carefully looked for upon the forehead and wrists at the end of the second or upon the third day. They were present in all the cases which came under my own observation. In the most malignant form—*purpura variolosa* — the rapidly extending ecchymoses soon hide them, and it may be difficult or impossible even to feel them; indeed, in several instances, I could not, *post mortem*, convince myself of their presence. In the other variety, *v. hæmorrhagica pustulosa*, the eruption comes out as usual, the extravasations occurring eitherin the vesicular or pustular stage.

Hæmorrhage from the *mucous membranes* takes place in the majority of cases, and constitutes one of the most prominent symptoms.

Epistaxis is common, especially in the early stage of the disease.

Hæmatemesis occurs in more than half of the cases. In my experience it is not copious, but the blood is mixed with the thick mucus brought up in the constant attacks of vomiting.

Melæna was noticed in about one-third of the cases; the blood in three was tolerably fresh and bright; as a rule, however, it was dark, and mixed with the mucous discharges.

Hæmorrhage from the *urinary passages* occurred in a large proportion of the cases, and was often profuse, the blood coagulating in the chamber-pot.

Metrorrhagia is stated to be exceedingly common in women. It was only noticed in one out of six females.

Hæmoptysis occurred in five cases, in one it was profuse and arterial. The sputa hawked up are frequently streaked with blood from the bronchial tubes and fauces.

These hæmorrhages from the mucous membranes do not

always occur. In five of my own cases (Nos. 16, 18, 20, 22, 23,) they were absent, and yet these were among the most severe and rapidly fatal cases of the disease, death ensuing on the 5th, 5th, 6th, 7th and 4th days respectively. In two, (Nos. 22, 23) *post mortem* examination revealed extensive hæmorrhages into the mucous membrane of the stomach, intestines, and urinary tract.

The *pulse* in the first days of the disease ranges from 110 to 120 beats in the minute, and is full and compressible. Gradually the arterial tension is increased, the pulse becomes more rapid, 120 to 140, small, hard, and irregular, and at last uncountable or imperceptible.

The *respirations* are unusually increased in frequence in the early stage, without any discoverable disorder in the lungs, and are out of proportion to the intensity of the fever. In the case of a negro whose respirations the morning after admission were 32, and the temperature 101°, after examining the lungs and finding nothing to account for the acceleration, my suspicions were aroused, and on careful inspection I was able, even on the dark skin, to detect the hæmorrhagic condition in and about the papules. This symptom alone directed my attention to his dangerous condition, which might otherwise have escaped observation, as there were no hæmorrhages from the mucous membranes. An interesting, and by no means unfrequent phenomenon,was the disturbance in the respiratory rhythm, first drawn attention to by Drs. Cheyne and Stokes, consisting in a series of superficial respirations, sometimes almost imperceptible, followed by a deep inspiration. This was noticed chiefly during the last 24 or 36 hours of life.

A short hacking cough was not an uncommon symptom. Many of the patients complained of sore throat, which, in some instances, appeared to be due to the constant gagging and vomting, in others to a foul, horribly fœtid, diphtheritic pharyngitis.

Consciousness is commonly retained until near the end. In only six cases was delirium a prominent symptom. A hyperæsthetic condition of the skin, mentioned by Zulzer* as common, was not noticed in any of the cases.

Loc. Cit.

In the true petechial form the patients seldom outlive the sixth or seventh day; where the hæmorrhages do not come on until the vesicular stage, they of course last longer. The cases upon which this paper is based died on the following days:

1 on the 3rd day; 2 on the 4th day; 5 on the 5th day; 6 on the 6th day; 5 on the 7th day; 4 on the 8th day; 4 on the 9th day.

The disease, in both its forms, is spoken of as invariably fatal, and such has been our experience in the small-pox department of the General Hospital.

Diagnosis.—In an epidemic of small-pox characterized by the presence of hæmorrhagic varieties, there is rarely any doubt of the nature of a case of fever presenting extensive cutaneous extravasations, and, perhaps, mucous hæmorrhages. Given, however, an individual case, when no epidemic was raging, and the matter would not be so easy.

We must be careful, in the first place, to remember that the initial rashes, which so often precede the milder forms of the disease, may be general and purpuric, closely resembling, or identical in appearance with, those accompanying the true petechial variety. It might be impossible to decide definitely for 24 hours on the nature of a case of this kind, In the latter the erythema would probably be more intense, the ecchymoses more extensive, and the general symptoms more aggravated. In many instances the progress of the case would alone determine its nature.

The bright, rosy-red, rash appearing on the second day might be mistaken for the eruption of scarlet fever, unless the mode of onset of the disease had been carefully watched. The diagnosis between hæmorrhagic scarlatina—fortunately a rare disease—and petechial small-pox offers still greater difficulties. Close inspection might discover in the latter papules about the forehead or wrists, and, I think, the characteristic odour of small-pox, which is well developed in this variety, would aid in arriving at a conclusion.

Cerebro-spinal meningitis is another disease which, in some of its forms, is apt to be confounded with purpuric variola. The pains in the head and back in the latter simulate those of

meningitis, in which disease also cutaneous ecchymoses not unfrequently occur. Indeed, I have the permission of the physician in charge to state that in case 25 on the list the error in diagnosis was made. I remarked to him at the *post mortem* examination upon the similarity of the pathological changes to those in hæmorrhagic variola. The mother, who had nursed the child, a short time subsequently took small-pox, and died.

With true *Purpura hæmorrhagica* —the *Morbus maculosus Werlhoffii*,—this variety of small-pox has many points in common. In both there are cutaneous and mucous hæmorrhages, but in the former the extravasations begin on the lower extremities, the skin is not so hyperæmic, the fever not so high, and there may be œdema about the joints, diarrhœa, and ascites.

Etiology.—From the table subjoined some interesting facts with reference to the general etiology of the disease may be drawn.

It is most common between the ages of 15 and 30. Thus of the cases there were—

Under 10 years, 3 ; between 15 and 20, 4 ; between 20 and 25, 9 ; btween 25 and 35, 6 ; between 35 and 45, 3 ; above 50, 1.

Young, vigorous, muscular persons form the majority of the victims, and this remarkable fact was noticed also in the late epidemic in Germany. (Zulzer, Ponfick). Several of my patients were above the average muscular development, most of them belonging to the artizan class. The predisposing causes mentioned by Aikman,* viz., sudden change of residence, debilitating nervous influences, unhealthy dwellings, were not speciallyobserved.

Men appear to be more frequently attacked than women.

With regard to vaccination the table shows that 14 were unvaccinated, while 13 showed marks of a by-gone vaccination. In none was there a history of re-vaccination. That is, the whole of these cases were unprotected, for I hold that we have no right whatever to say that a man is *vaccinated* because he has cicatrices on his arm. The proof that these 13 were not vaccinated lies in the fact that they died of the worst form of smallpox. No properly *vaccinated* person, one in whose tissues the impress of vaccina persists, can, I maintain, take small-pox.

Similarly Zulzer's† cases, 35 in number, all showed scars,

* *Glasgow Medical Journal*, 1871, p. 60. † Loc. Cit.

but none of them had been re-vaccinated. Other observers state that persons without cicatrices of a former vaccination form the majority, or even all of the number attacked.

The proportion of hæmorrhagic cases has been unusually large in this epidemic, not only here but in other parts of the world; indeed, it has been the most virulent type of small-pox known since the beginning of the century.

In the small-pox department of the Montreal General Hospital there were admitted from Dec. 14th 1873, to July 21st 1875, one year and seven months, 260 cases. Of these 24 died of the variety under consideration, or 9.23 per cent.

Case.	Age.	Sex.	Unvac.	Vac.	Day of Death.	REMARKS.†
1	27	F.	.....	V_1^*	8th	Delirium. Hæmatemesis.
2	28	F.	.....	V_2	6th	Epistaxis. Melæna. Hæmoptysis.
3	29	M.	Unv.	....	8th	Delirium. Melæna.
4	53	M.	.....	V.	3rd	No papules evident. Died 3½ hours after admission.
5	20	F.	Unv.	....	6th	Epistaxis two days before. Slight convulsions.
6	19	M.	.....	V_2	7th	Hæmaturia.
7	35	M.	.....	V_2	9th	Much Delirium. var. hæm. pust. No mucous hæmorrhages.
8	20	M.	.....	V.	6th	Delirium. Melæna, frequent.
9	19	M.	Unv.	....	7th	Hæmatemesis. Melæna.
10	24	M.	Unv.	....	8th	Epistaxis. Melæna. Hæmatemesis.
11	25	M.	Unv.	....	9th	Var. hæm. pustulosa. Hæmoptysis. Old lung disease.
12	..	F.	.....	V_2	8th	Hæmaturia. Melæna. Hæmoptysis.
13	23	M.	.....	.	7th	Epistaxis. Hæmoptysis.
14	22	M.	.....	V_2	4th	Hæmaturia. Hæmoptysis. Melæna.
15	20	M.	.....	V_2	9th	V. hæm. pustulosa. Hæmaturia. Hæmatemesis.
16	21	M.	.....	V_1	5th	No mucous hæmorrhages.
17	19	F.	Unv.	....	9th	V. hæm. pustulosa. Hæmaturia Hæmatemesis.
18	44	M.	Unv.	....	5th	No mucous hæmorrhages.
19	24	M.	Unv.	....	5th	Hæmaturia. Metrorrhagia.
20	36	M.	.....	V_1	6th	Delirium. No mucous hæmorrhages.
21	6	M.	Unv.	....	4th	Hæmaturia. Hæmatemesis Melæna.
22	35	M.	.....	V.	7th	Delirium. No mucous hæmorrhages.
23	16	M.	Unv.	....	4th	No mucous hæmorrhages.
24	30	M.	Unv.	....	7th	Hæmaturia. Hæmatemesis. Hæmoptysis.
25	4	F.	Unv.	....	6th	Hæmatemesis.
26	36	M.	Unv.	....	6th	Hæmaturia. Melæna
27	6	M.	Unv.	....	5th	Hæmaturia. Hæmatemesis

* The figures indicate the number of scars.

† Cutaneous extravasations occurred in all.

Pathology—The condition of the internal organs in this disease has received a good deal of attention within the past few years. The remarks which I shall here make are based upon seven carefully performed autopsies.*

The prominent characteristics in all were the hæmorrhages into the various tissues and organs.

The *blood* during life was carefully examined in six cases, but no change of importance noticed in the corpuscles. Post mortem it was dark in colour and generally fluid.

In the *meninges* of the brain scattered ecchymoses were noticed in five instances. The venous sinuses of the dura mater and the vessels of the pia mater were full. In cases 21 and 22 thin coagula of blood existed on the surface of the pia mater. The *brain* appeared normal, the consistence remarkably good. In case 22 there was a small clot in the right ventricle. The *spinal cord* was examined in one instance, when nothing abnormal was found.

On the *pericardium* maculæ were present, often quite large on the visceral layer along the tract of the coronary vessels. The *heart* substance was firm, dark in colour; in several instances minute ecchymoses were observed on the endocardium and in the muscular walls.

Both visceral and parietal layers of the *pleura* contained ecchymoses in 6 cases. The *lungs* were crepitant, and contained much blood in the posterior parts. In case 23 there was a patch of catarrhal pneumonia. In five instances apoplectic spots were found, none of them larger than a walnut.

The *spleen* in all was firm, about the natural size, in two a little enlarged. On section the substance was compact, smooth, of a dirty-purplish red colour, and in six of the cases the Malpighian corpuscles were remarkably enlarged, appearing as round white bodies on the dark background of the pulp.

The *kidneys* appeared of normal size. Ecchymoses on the capsule common; in one instance a thin clot existed upon the organ. The consistence of parenchyma was good. In three cases minute hæmorrhages had taken place into the substance. The vessels as a rule were full. The *pelves* of the kidneys in

* For two of these I have to thank Sister Rosalie, apothecary at the R. C. Civic Small-pox Hospital, who kindly informed me when any of these cases occurred.

four instances were plugged with dark clots, which extended up into the calyces, and down the ureters. In all ecchymoses were present on the mucous membrane. In the mucous membrane of the *bladder* small hæmorrhages were met with on five occasions. In case 21 the walls of the whole organ were uniformly infiltrated with blood, not a trace of normal tissue could be seen on section.

The liver in five cases was of normal size, unusually dense and firm, lobules moderately distinct, of natural colour, and contained a good deal of blood. In two cases it was large, pale in colour, very friable, and on examination proved fatty. The general condition in both these cases accounted for the state of the liver, one had suffered from chronic disease of the leg, the other was a drunkard. Ecchymoses upon the capsule were common.

The mucous membrane of the *stomach* in all the cases showed an enormous number of extravasations, some small and capillary, others as large as a bean, and projecting on the surface. Similar appearances were found in the *small intestines*; in two instances the ecchymoses were most abundant in the ileum, in the others the upper region of the bowel was most affected. Peyer's glands were swollen and prominent in four instances. In the *large bowel* the extravasations were only noticed in three cases.

In two instances the *mesenteric glands* were uniformly infiltrated with blood, looking like dark-purple grapes. Extravasations occurred in all the cases in the *retro-peritoneal tissues*, about the aorta, along the iliac arteries, and about the lumbar nerves. In most they were small and confined to the adventitia and parts about the vessels, in one, however, quite a large suggillate was found in the region of the right psoas muscle. Similar appearances were noticed twice about the thoracic aorta.

Such are the chief pathological changes in the internal organs, and they correspond pretty closely to those described by Ponfick* in the Berlin epidemic. In addition to the hæmorrhages, the firm, dense condition of the heart and abdominal glands seems peculiar, and stands in marked contrast to the appearances of these organs in variola vera, in which they are swollen, soft

* Berliner klinische Wochenschrift, 1872.

and friable, and in that state of cloudy swelling common to prolonged fever. So impressed is Ponfick with the pathological and clinical differences between these extremes of small-pox, that he is inclined to group them as distinct diseases. But, just as transitions are met with clinically between the macular hæmorrhagic form and that in which extravasations take place in the vesicular and pustular stages, so also, I think, in a more extended series of post mortems appearances would be found intermediate between the extremes, and where the disease had lasted any time the same pyrexial changes would occur. Indeed, Curschmann* states that he has noticed them in *variola hæmorrhagica pustulosa.*

On the intimate pathology of this disease I can offer no suggestion. We are, as yet, profoundly ignorant of the conditions of its genesis, and do not know whether it depends on the intensity of the poison or the extreme susceptibility of the patient.

Most histologists are agreed that in these purpuric disorders the red corpuscles pass through altered or thinned and not ruptured vessels, but as to the causes of this general *diapedesis*, as the process is called, we have no data upon which to form a judgment.

The *treatment* of the disease is eminently unsatisfactory, the patients almost invariably die. A few instances are recorded of recovery from variola hæmorrhagica pustulosa. All the usual medicines indicated under these circumstances were tried, gallic acid, ergot, turpentine, acetate of lead, &c., without the slightest benefit. Quinine was used in large doses, and in three cases I used the cold pack.

Since the closure of the wards I have met with an article in the *Glasgow Medical Journal* by Mr Aikman, formerly assistant medical officer at the Hampstead Small-pox Hospital, in which he recommends strychnia in large doses, and states that under this treatment many of these cases recovered. He gives as much as a drachm and a half of the liquor strychniæ in the twenty-four hours in severe cases, combined with iron and quassia.

* Ziemssen's Encyclopædia. Vol. II., Art. Small-pox. p. 387.
† Loc. Cit

THE EARLY USE OF THE CLINICAL THERMOMETER.

By W. F. Shirriff, M.D., L.R.C.S., Eng.,

Huntingdon, Que.

I do not remember the history of the clinical thermometer, but until lately I supposed it was a comparatively recent invention. I have a copy of the fourth edition of Dr. James Currie's Medical Reports, printed in 1805, on the effects of water cold and warm as a remedy in fever, and other diseases. Some time ago I was looking over the 1st volume and was much surprised to find a thermometer described almost identical with those at present in use. Dr. Currie strongly advocates the use of the cold affusion in fevers, but only when the temperature of the body is considerably above the natural heat. On pages 35 and 36, he says: "In taking the heat of the patient, I have generally used a small mercurial thermometer of great sensibility, with movable scales, made for me by Mr. Ramsden, after a form invented by the late Mr. Hunter, and used by him in his experiment on the heat of animals, and I have introduced the bulb under the tongue, with the lips close, or under the axilla, indifferently: having proved by repeated experiments that the heat in these two places corresponds exactly, and gives a just indication of the heat of the surface of the body, where sheltered by the necessary teguments from the contact of the external air. Finding, however, considerable risque in using the straight-tubed thermometer in contagious diseases, I got some instruments of this kind made with a small bulb and curved at the end. The bulb being introduced under the tongue or axilla, the observer can stand behind the patient, and mark the rise of the mercury, without coming into the immediate sphere of his respiration. Though no injury has in any case incurred from the use of the thermometer, yet a further improvement has suggested itself. By introducing a small piece of air into the tube after the manner of Mr. Six, a permanent indication of the greatest heat is obtained, and the approach of the observer towards the patient during the experiment is rendered unnecessary." On page 21 he describes a case, dated 1st January,

1790. I will transcribe it as it is interesting. He says: "a nurse in the fever ward of the Infirmary having several patients under her care, caught the infection. She was seized with violent rigors, chilliness and wandering pains, succeeded by great heat, thirst, and headache. Sixteen hours after the first attack her heat at the axilla was 103° Fahr., her pulse 112 in the minute and strong, her thirst great, her tongue furred, and her skin dry. Five gallons of salt water, of the temperature of 44° were poured over her naked body, at 5 o'clock in the afternoon, and after being hastily dried with a towel she was replaced in bed; when the agitation and sobbing had subsided, her pulse was found to be at the rate of 96 strokes in the minute, and in half an hour afterwards it had fallen to 80. The heat was reduced to 98° by the affusion, and half an hour afterwards it remained stationary. The sense of heat and headache were gone and the thirst nearly gone. Six hours after she was found perfectly free of fever, but a good deal of debility remained.

Small doses of colombo were ordered with a light nourishing diet, and for several days the cold affusion was repeated at the same hour of the day. As at first the fever never returned." As this case is dated 1st January, 1790, the clinical thermometer must have been in use some time before.

Sanctorius who was a teacher of medicine in Padua from 1602 to the time of his death, in 1636. used a thermometer of his own invention to determine the temperature of the body in disease. Subsequently Boerhave and van Swieten followed up the practice, and DeHaen made extensive use of the thermometer, apparently using Fahrenheit's instrument, which was invented about the year 1726. DeHaen was fully impressed with the importance of the clinical use of the thermometer, and not only employed it in his own practice but taught its use to his class; his observations on thermometry are to be found in his works entitled *Ratio Medendi*.

John Hunter made many observations on the temperature of the body, and he recorded local elevation of temperature, in the inflammation which followed surgical operations. Dr. James Currie first published his medical reports in 1797. These went through several editions but they did not appear to be of practical value, and therefore were neglected. Since that time many observations have been carefully recorded by various observers, English and Continental. But thermometry did not assume the important position it holds at the present day until after the declaration of the doctrine of the unity and correlation of forces. This produced a new train of reasoning since it was apparent that the temperature of the body was a convertible force subject to set laws. Bärensprung, Traube, Wunderlich, Aitkin, who gave to us the invention of the self-registering thermometer, and a host of other workers, have all contributed to render the thermometer a most important auxiliary in the treatment of disease.—Ed.

Reviews and Notices of Books.

Inhalation in the Treatment of Disease; its Therapeutics and Practice.—A treatise on the inhalation of gases, vapours, fumes, compressed and rarefied air, nebulized fluids, and powders. By J. Solis Cohen, M.D., Lecturer on Laryngoscopy and Diseases of the Throat and Chest in Jefferson Medical College; one of the physicians to the German Hospital of Philadelphia, &c. Second edition, revised and enlarged with many new illustrations. 8vo. pp. 392: Philadelphia, Lindsay & Blakiston, 1876.

Enthusiasts in favor of the treatment of pulmonary complaints by means of local applications claim for this topical medication a great superiority over the ordinary methods by the internal administration of medicines. We are not prepared to go with them so far as this, insomuch that if we were compelled to make a choice between inhalation and internal dosage we should certainly retain the latter. Take, for instance, the case of softened tubercle. The most favorable result which we can possibly hope for in these cases consists in the absorption of the fluid parts and the obsolescence of the semi-solid remainder, *i. e.*, its conversion into a calcareous and inert mass, whilst at the same time the process of deposition is arrested, and consequently no new tubercle is formed elsewhere. Now this involves the extinction of what we call the tuberculous crasis, and must, we think, be intimately connected with the general condition of the nutritive functions. If this view be correct local applications can have but little to do with effecting the desired result. In saying this much, we do not for a moment desire to be understood to be decrying the nsefulness of inhalation and the breathing of atomized fluids, &c., because we have a high opinion of their utility, but we wish merely to dissent from the views of those who, we think, ride this hobby rather too severely, and perhaps to the exclusion of more beneficial, general, and hygienic measures. The great assistance to be derived from the use of medicated steam and atomized fluids is at present undoubted, and it behoves every

practitioner to have a fair knowledge of the proper means of applying these, and of the various drugs which are suitable for use in different cases. The little work of Dr. Cohen is very well suited to serve this purpose, being very complete in its mention of all the substances which may be beneficially employed in this way, and in illustrating and describing all the appliances which are requisite for the several procedures. Much of the success of these very valuable auxiliaries will depend upon the care with which the thoroughness of their application is attended to by the practitioner himself, and no doubt it is the time and trouble thus involved which prevents their being universally adopted.

Part I. includes the inhalation of airs, gases, vapours and fumes. Here we have short notices of almost all known substances which have been thus employed, together with their therapeutical applications and modes of usage. The sections on condensed and rarefied air are interesting, as some rather extensive experiments on this treatment have recently been made in Paris and elsewhere on the continent. Some of the most recently discovered and most valuable drugs are, we think, treated rather hurriedly, and without the consideration that their importance and their novelty demand. For instance, *Nitrite of Amyl* has but a short notice awarded it and its main indications for employment pointed out. It seems to us that a good deal more detail on this subject would have been very acceptable to the readers.

Part II. On the inhalation of nebulized fluids or sprays is made interesting by numerous experiments and arguments as to the penetration of these fluids into the respiratory passages, together with observations on all articles of the materia medica which are suitable for this mode of administration.

Part III, considers the inhalation of powders, and *Part* IV is a short chapter on medicated atmospheres.

There are a number of illustrations which also will be found very useful in explaining the text.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. XI. Diseases of the Peripheral Cerebro-Spinal Nerves. By Prof. Wilhelm Heinrich Erb, of Heidelberg, Baden. Translated by Mr. Henry Power, of London, England. Albert H. Buck, M.D., New York, Editor of American Edition; 8vo. pp. 623. New York: William Wood & Co., 27 Great Jones street, 1876.

Considerable progress has been made, during the last few years, in the pathology of the nervous system. This has very materially extended our acquaintance with the diseases of the peripheral nerves, although the knowledge thus gained may be considered small and unsatisfactory, when compared with advances which have been made in pathological research in other departments. The division of all nervous diseases into functional and organic is usually adopted. From being unable to recognise organic changes which may possibly exist, or have existed during life, we have no alternative but to adopt the signification of disturbed function. Pain is the essential feature of all neuralgia: it is the most commonly observed sensation, and may be produced in all sensory organs. It may have as its factor some anatomical lesion, or it may appear to be destitute of any special and well-marked cause.

Erb holds, in regard to pain in neuralgia, that "a nerve may be at one moment in a state of the most violent excitation, whilst at the very next instant it may be performing its functions in a perfectly normal manner,—and since a perfect intermission of the painful phenomena may thus occur, it cannot have undergone any notable anatomical changes; every such change would be accompanied by considerable interference with the functions of the nerves, that is to say with a high degree of anæsthesia." Anstie states that anatomical changes, where they do exist, are simply accidental, and that they rarely act as factors in the production of neuralgia. The occasional anatomical lesions found in the nerve centres, or in the course of the nerves themselves, unaccompanied by pain of any kind,

must indicate that these changes are not specially essential as factors of neuralgia.

Professor Erb has given us in this, the eleventh volume of this valuable series, a dissertation on diseases of the peripheral cerebro-spinal nerves. The contents of this volume are divided into two parts. In the first, which comprises the greater part of the work, will be found considered functional diseases of the peripheral nerves, or neuroses,—he takes up and discusses neuroses of the sensory nerves—and then he passes on to neuralgia of individual nerves. He then takes up neuralgia of the fifth pair, cervico-occipital neuralgia, neuralgia of the brachial plexus, neuralgia of the dorsal nerves, intercostal neuralgia, and neuralgia of the lumbar, sciatic and coccygeal plexuses, and a chapter on anæsthesia—general cutaneous and particular forms of anæsthesia. The author then passes on to discuss the neuroses affecting the nerves of special sense—neuroses of the nerves of taste and of the olfactory nerves. The motor nerves next demand his attention, and he commences with a general description of spasm and convulsions, taking up the mode of appearance, pathogenesis, etiology, symptomatology, sequelæ, electrical relations, prognosis and treatment. Special forms of spasm next come in order. Clonic and tonic spasm of various muscles or groups of muscles, supplied by nerves. Under this head are treated spasm of the diaphragm, writers' cramp, tetany, contractures. In the next division are considered paralysis. After a general consideration of the subject, the special forms of paralysis are given. This forms the first part of the work, and, as we before observed, takes up the larger part of the book.

In the second part, the author takes up and discusses the anatomical diseases of the peripheral nerves, such as hyperæmia of the nerves, inflammation of the nerves, or neuritis; atrophy of the nerves and hypertrophy, with neoplastic formations in the nerves.

We have endeavored in very limited space to give to our readers a general view of the contents of this volume. The ground gone over is very extensive, and much which is treated of here will not be found elsewhere. The subjects are all ably

handled, accurate in description, and highly practical in bearing. The translation is very clear and readable, and we cannot but express a belief that the Cyclopædia, as a whole, will become an unfailing source of reference to those seeking for information on the subjects treated of in these volumes. Messrs. William Wood & Co. have done their part excellently, and each volume, as it appears, is not only a store-house of information, but an elegantly got up book.

On Coughs, Consumption, and Diet in Disease. By HORACE DOBELL, M.D., F.R.C.S., &c., &c. Edited by D. G. Brinton, M.D.; 8vo., pp. 222. Philadelphia: D. G. Brinton, 115 South Seventh street, 1877.

This little work is a compilation or collection of extracts from published lectures delivered by Dr. Horace Dobell, of London, England, and are so arranged as to form a continuous treatise on the physical diagnosis and treatment of diseases of the chest.

Dr. Dobell is well-known to the profession as an enthusiastic worker, and has devoted much time and attention to pulmonary diseases. This can be fully attested when it is borne in mind that he is at the present time engaged in the publication of annual reports on diseases of the chest. The first report, published in 1875, was fully appreciated; the report for 1876, quite recently published in England, we have not, so far, received. Dr. Dobell has enjoyed unusual advantages, as he was for some sixteen years attending physician to the Royal Hospital for diseases of the chest; after which lengthened service he was elected on the consulting staff to that institution. This gives him a claim to be heard with attention, as his experience has been large. The editor and compiler of this little work divides the subject into three parts. In Part I. he gives the diagnosis of bronchial and pulmonary diseases. There is fully described the systematic examinations of the chest, as followed by Dr. Herbert Davies, Dr. Sibson, and Dr. C. J. B. Williams. We then have a chapter on the diagnosis of early

phthisis, on the value of cavernous sounds, and of the importance of hæmoptysis as a symptom ; on winter cough, on the diagnosis of narrowed air passages ; post nasal catarrh, ear cough, and of the natural course of a neglected cough.

Part II, consists of the treatment of colds, coughs, and consumption. In this will be found a description of the pathological conditions existing in winter cough, hints as to the avoidance of cold, the early treatment of colds, and the therapeutic resources in catarrh ; the management of consumption, and on the use of pancreatic emulsion in phthisis. In the third part will be found directions as to suitable diet in sickness, the diet of consumptives, the use of nutritive enemata, and special receipts for medical food. This little work seems very practical in its bearing, and will be of use to the busy practitioner.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Subcutaneous Injections. — Subcutaneous injection of pure or distilled water as a means of relieving pain. Dr. Lafitte read a paper in the Medical Section of the Nantes Scientific Congress for 1875, on the subcutaneous injection of water. He says he has found it most useful in many cases ; he relates a number of cases, and states he has several times relieved the severe pain of acute rheumatism by these injections. He used water subcutaneously as early as 1872, and succeeded in immediately relieving pain in a woman who was suffering most acutely from lumbago. Eight grmm. of distilled water was injected, and the pain did not return. In cases of sciatica, supra-orbital and facial neuralgia, as well as in intercostal neuralgia and rheumatic affections of the joints, he has found water injected subcutaneously quite as useful as morphia. He says that the result is not always favorable, and that the pain frequently returns, but so it does after morphia injections. Dr. Lafitte never found that the hypodermic use of

water caused local abscesses as is the case with the subcutaneous injection of other substances. Water causes at first a burning pain which soon disappears. About 4 grmm. is the usual quantity to inject, The injection, which is done in the usual way, must be done at the painful spot, otherwise it is useless; several ordinary-sized (ʒss) syringes-ful may be injected; after you have emptied one syringe, wait two minutes, if by that time the pain is not relieved inject another syringe-ful, and so on up to six, till the pain stops, waiting two minutes between each injection. Lafitte says he has never found need for more than six syringes-ful, and that two or three generally suffice. 2 grmm. of water was the smallest amount which proved beneficial, and to use more than 10 to 12 grmm. is useless. Bad results from these repeated injections never occur.

Dr. Pillet speaks highly of hypodermic injections of water in lumbago and intercostal neuralgia. Dr. Lelut says that for the last three months he has used the pure water injections, with the best results. He relates how he came to use it. His servant one day upset the bottle containing his morphia solution for subcutaneous injections, and to conceal her clumsiness filled the bottle with ordinary water, Dr. Lelut, not knowing this, injected the water into the thigh of a patient who was suffering severely from sciatica, and whom he was treating by the subcutaneous injection of morphia. The patient was astonished at the instant relief of the pain, and said: "What kind of a liquid is this you are using which causes me no uneasiness or no sickness at the stomach like the former?" Since then Dr. Lelut has used nothing subcutaneously but water.

Dr. Dresch praises the usefulness of this injection especially in muscular rheumatism. He also tells of a case of osteo-sarcoma of the thigh in which he used daily 60 ctgm. of morphia subcutaneously, chloral, cicuta and other remedies, and where hypodermic injections of water succeeded in relieving the pain quite as well as morphia without producing the disagreeable constitutional effects of that drug. Dr. Dresch does not use simple water, but prefers peppermint water.

Dr. Burney Yeo, of London, says he found subcutaneous

injections of water useful in relieving the pain of a patient suffering from thoracic aneurism.

Dr. Gorrequer Griffith has used these injections since 1868. He prefers warm water.

Dr. Richards of Birmingham, also recommends it, he injects six drops of warm water at a time.—(*Schmidt's Jahrbücher*, No. 5, Bd. 170, 1876).

Chronic Enlargement of the Spleen. (Local treatment by Professor Mosler).—The operation of Splenotomy which has succeeded well in animals, and also has been repeatedly performed in men, proves that the partial extirpation of the spleen, (of which nine successful cases are known) as well as total extirpation of a normal spleen, may succeed if the operation is undertaken in consequence of wound of the spleen from accident; but that the operation for internal disease has been most unfortunate in its results, six cases out of nine being followed by death. The two cases operated on by Koberle and Bryant for leukæmia, died during or immediately after the operation from severe hæmorrhage. Furthermore, the admissibility of the operation is questionable, owing to the difficulty of diagnosis, as the case of Péan proves, this case was diagnosed as cystic disease of the left ovary, and afterwards it was found that a unilocular spleen cyst had been extirpated.

In chronic spleen enlargement, Mosler recommends injection into the substance of the spleen, and so treats his cases. He found that he could inject tincture of iodine through the abdominal walls in the splenic region without an after intense peritonitis. In man he injects a weak solution of carbolic acid, or Fowler's solution of arsenic. In this way he treated a patient 33 years of age who had suffered from intermitting fever for 1½ years, which had run an irregular course and was subsequent to an attack of typhoid fever; he also suffered from œdema of various parts of the body. The spleen was much enlarged. For sixteen days, twice daily, he was given a subcutaneous injection of amorphous hydrochloride of quinine (one part to five of water),

and immediately after the injection a bag of ice was applied over the part for several hours to protect from local inflammation; when this precaution is not taken there are apt to be abscesses and gangrene. Although a diminution in the size of the spleen took place, Prof. Mosler thought a more rapid diminution would take place by injecting into the substance of the spleen itself. This he did and afterwards applied an ice bag over the part for several hours, in order that by contracting the muscles the amount of blood might be reduced. He injected a solution of carbolic acid (2 to 100 of water) and one month later injected the same amount of Fowler's solution of arsenic, of the strength of one to ten of water. After the injection of the carbolic acid the pain was so great that 0.2 grmm. of morphia had to be injected hypodermically, and during the following twelve hours an ice bag applied. After a couple of days there was no pain and no elevation of temperature nor was there a reaction of any kind. A distinct lessening of the size of the tumour was made out immediately after the injections into the substance of the spleen and the general appearance of the patient was much improved. Professor Mosler finds quinine the best remedy for injecting *into* the spleen, as it is most useful in lessening the blood contents.

Czerny used injections of arsenic solution with good effect in enlarged glands. In one patient he injected 740 drops in 74 injections of 10 drops each, and within seven months the patient was completely well.—(*Archiv. f. Klin. Med.*, 1875. Quoted in *Schmidt's Jahrbücher.*)

Supra-orbital Neuralgia. — (Dr. C. Roese, Leipsig, 1876.—Inaug-Dissért).—The most frequent causes of supra-orbital neuralgia are malaria, syphilis, hysteria, cold and injury. Furthermore, it accompanies different forms of eye affections, and in some rare cases is due to tumorous thickening of the bones of the skull, &c. Typical malarial neuralgia occurs in the young and middle-aged, and men are oftener affected than women. Shoemakers on account of their work

are peculiarly susceptible to neuralgia, but not the typical form. Typical supraorbital neuralgia is observed in the course of cold or hysteria. The pain of supraorbital neuralgia generally begins in the morning and lasts for from half an hour to six hours. The quotidian type is exceptional. The right supraorbital nerve is more often affected than the left, and both are very seldom affected together. The proportion of these kinds in sixty-one cases was 35 : 18 : 8. In occasional cases a glaucomatous condition and anæsthesia of the retinæ have been observed : the connection between them has not been made clear.

The best remedies in typical cases of neuralgia are quinine and arsenic.

Iron is also very useful. Among the preparations large doses of ferrum oxydatum s. hydricum, have been well thought of. Hot foot baths are also beneficial, especially when the neuralgia is double. Blistering the forehead or painting it with iodine may also be tried.—*Schmidt's Jahrbücher*, No. 8, 1876.

Is Syphilis Transmissible by Milk?—R. Voss inoculated three prostitutes with milk of a syphilitic woman, suffering from a papular syphilide, and condylomata about the genitals and anus ; the breasts were quite free. The milk was obtained by pressure, and injected hypodermically. The first case was syphilitic, the inoculation was naturally without effect. The second had gonorrhœa, and was inoculated with the milk on the 27th of September. There formed a large inflammatory swelling—as in the other patients—which suppurated, and was healed by the 24th of October. On the 3rd of November, 40 days after the inoculation injection, a papular eruption came out about the place of injection, and on the 8th showed itself on the remainder of the body as a maculo-papular syphilide, combined with swelling of the lymphatic glands. Under inunctions of Hg., the symptoms disappeared. The author, in consequence, regards it as proven that the milk of a syphilitic person is just as capable of producing syphilis as the blood.—*Petersb. Med. Wochenschr. in Centralblatt.* No. 44.

Miliary Tuberculosis of the Pharynx.—In a paper read before the Berlin Medical Society, Dr. B. Fränkel described six cases of tuberculosis of the pharynx, which had come under his observation. In every instance there was also miliary tuberculosis of several or all the other important organs of the body.

In answer to the question: Does the tubercular process ever originate in the pharynx? it cannot be denied that tubercle often exists in the lungs or elsewhere before it makes its appearance in the pharynx, though Isambert (*Annales des Maladies de l'oreille et du pharynx*, ii. page 165), mentions cases in which the latter was first affected. In all of Dr. Fränkel's cases the apices of the lungs were already diseased when the patients first came under notice, but the disease of the pharynx was the first to attract their attention and continued to be the chief object of solicitude up to the very last. The ulceration of the pharynx was of an unmistakably tuberculous character, with a tendency to spread superficially, of a cheesy or lardaceous appearance, and seldom presented any evidence of granulations.

The edges of the ulcers were irregular and excavated, and only in some instances surrounded by an inflammatory areola. In the vicinity of the ulcers there were a greater or less number of small grey nodules; when numerous or confluent these gave rise to the so-called lardaceous infiltration, and it seems probable that the ulceration extends by means of their disintegration. Swelling of the lymphatic glands, especially those of the neck, was also a constant symptom.

The most important subjective symptom was always pain in the throat, which was increased by the act of swallowing. The severity of the pain varied greatly in different cases, as did also its character. Some patients also complained of a sharp lancinating pain in the ear caused by the act of swallowing. This, however, is commonly met with in other forms of sore throat, and does not depend, as some suppose, upon ulceration in the neighborhood of the Eustachian tubes. All the patients experienced greater or less difficulty in swallowing, and avoided doing so as much as possible, on account of the pain or uneasiness which it occasioned.

Solid food could not be taken when there was extensive ulceration and fluids often regurgitated through the mouth or nose, and to this difficulty in taking food is to be ascribed, in part at least, the rapid emaciation which characterized the later stages of the disease.

The ulceration would appear to begin as a rule at the sides of the pharynx and could be observed in all stages in the same case, from the deposition of isolated or confluent grey nodules, to the formation of large ulcers which appeared to have undergone caseous degeneration. The uvula, when also involved, was thickened and infiltrated with tuberculous deposits. Sometimes there was a tendency to hypertrophy with polypoid excrescences about the tonsils.

The ulceration never attacked the œsophagus, but sometimes extended to the tongue and lips.

The larynx was generally not affected until the disease had made considerable progress in the pharynx, but eventually it would seem always to have become involved, the first indication of which will be seen in an œdematous condition of the epiglottis, and afterwards ulceration of the same, and also of other parts of the larynx. There was always an increase of the temperature, subject, however to great variations, and giving a curve similar to that of acute miliary tuberculosis.

The diagnosis of this form of disease of the throat requires some care, for although it does not in any way resemble the ordinary throat affections, such as diphtheria, angina follicularis, &c., it might readily be mistaken for the so-called scrofulous ulcers of the pharynx, but in the latter disease it is to be noticed that the ulcers are deeper, more sharply defined, and tend to have a longitudinal rather than a transverse direction; moreover, the yellow spots around them are seen to be genuine abscesses, and not merely grey or cheesy nodules.

It is, however, only in some cases of syphilitic ulceration that any real difficulty in the differential diagnosis can occur, for in either disease there may be swelling of lymphatic glands in various parts of the body, the ulceration may attack the tongue, lips and cheek, and in one of Dr. Fränkel's case, there was also

swelling of one testicle which might have created doubt as to the nature of the constitutional affection.

If the history of the case is not sufficient to establish the syphilitic or non-syphilitic character of the affection, a careful examination of the ulcers will almost certainly suffice to decide the point, for the mucous plaques of the early stages of syphilis can hardly be confounded with the tubercular infiltration and ulceration above described. The ulcers of the pharynx, which occur in the later stages of syphilis besides being deep and sharply defined, tend to cicatrize and contract, and thus assume altogether a different appearance from that of the tubercular ulcers. Tubercular ulceration of the pharynx almost always ends fatally within a few weeks or months. Treatment would seem to be unavailing, though of course supporting measures are indicated. Some relief to the pain is afforded by painting the throat with a solution of morphia and glycerine. Death takes place from exhaustion and not from any impediment to respiration in consequence of extension of the disease to the larynx.—*Berlin. Klin. Wochenscrift*, Nos. 46 and 47. 1876.

Dislocation of the neck from a blow—Charles Orton in the *Lancet*, considers this case to be of some interest, not only on account of the rarity of the accident itself, but also of the cause of the accident, which was by a blow by a man's fist. The case was sent for trial at the Stafford Assizes, and the man who struck the blow, pleading guilty, was sentenced to twelve months' hard labor.

I did not see the deceased until five hours after death, when I made the post-mortem examination.

The eye-witnesses describe him as stooping forwards, with the chin slightly turned to the left. The blow was delivered under the right angle of the jaw by the right-hand fist, partially from behind and partially sideways, to the deceased, who fell towards the left, but backwards, and "seemed dead at once." He never moved after falling.

Post-mortem examination.—A man apparently beyond fifty years of age, fairly built but not muscular, and one who had no

doubt suffered from inflammation of lung and pleura, adhesions being thick and strong on the right side of the thorax. The piece of lung on the table shows to all appearance the cicatrix of an old cavity. Heart and other organs healthy. The head had lost what the French call its "solidity," rolling about in any direction. It was a pure and total dislocation between the atlas and axis; the head, to which was attached firmly the atlas, was thrown forwards; the odontoid process thus pressing on the front of the cord, and causing instant death. The posterior and other ligaments connecting the atlas and axis and axis and occipital bone were ruptured, but there was no fracture, not even of the odontoid process, and, what I opine to be still more rare, no rupture of the transverse ligament.

I think this case will go far to prove the truth of Dupuytren's declaration "that such accidents are wholly beyond the resources of our art." I am aware that Malgaigne quotes two cases of recovery after total dislocation of the neck between atlas and axis. In one case which occurred in the practice of his father, the head was bent forwards, the chin touching the top of the sternum, and remaining it that position immovably fixed, all other portions of the body preserving their natural functions. In the second case, under Ehrlich, there was dislocation of the atlas backwards. The head was found resting on the right scapula, having completely lost its solidity, rolling from one side to the other. The patient was unconscious, and the whole body in a state of complete paralysis. The reduction was accomplished with an audible sound, and the head resumed its position firmly; but there is a further statement made that the head was afterwards maintained in place by a bandage. In the latter case I cannot understand the head, after rolling about, being placed "firmly" in position, with an audible sound. In the former I cannot understand the immovability of the head, the chin on the top of the sternum, and the functions of the body preserved. At least it differs greatly from my case, where the chin reached to the middle of the sternum, and where there was perfect mobility of the head, which could easily be placed in position, but would not remain there.

Three cases of Injury to Nerves.—By Edmund Owen, M.B., F.R.C.S., Eng., Assistant-surgeon to St. Mary's Hospital, and to the Hospital for Sick Children.

Some time since, a boy was brought to me who had, a day or two previously, received a severe blow from a stone over the right eye. The skin was contused in a small spot over the supraorbital foramen, and a large crop of vesicles had broken out on the forehead and scalp, all over the extensive area of distribution of the supraorbital nerve. This case is particularly interesting, when taken in connection with Dr. Broadbent's remarks on Herpes, in the Journal of Dec. 9th, and with the following case.

The second case is that of a labourer from one of Her Majesty's dock-yards, who was under my care, at St. Mary's Hospital, two years ago. Three months previously he had met with a severe wound of the front of the wrist from a piece of broken glass. A recent cicatrix existed over the inner side of the tendon of the flexor carpi radialis; and on pressing the finger firmly over it—that is, against the median nerve—the patient complained of severe pain. There was impaired sensation over the anterior and outer aspect of the hand; and on the backs of the last phalanges of the outer fingers, including the radial side of the ring finger, sensation was almost completely obliterated. (Hilton on *Rest and Pain*, second edition, page 174). As the man said that he was improving, we advised no interference, although, in all probability, some small fragments of glass still lay against, or imbedded in, the nerve-trunk. While he was under observation, a copious eruption of small bullæ spread itself over the area of distribution of the median nerve in the hand. If injury to the nerves gave rise to these two conditions, herpes in the child, pemphigus in the adult, may not many of the pathological conditions of the skin which follow fracture of bones of the extremities be due to nerve-lesions?

The third case is that of a barman, who is now an out-patient of mine, suffering from abscesses on the inner side of the elbow. A year ago he was treated for a similar affection at another hospital, when it was found necessary, he says, to make at different times, no fewer than thirty incisions for the evacuation of abscesses. Many of the scars are even now clearly perceptible. One of them (rather a large one) lies over the inner side of the forearm, just below the elbow. Possibly, the gentleman who made the wound had satisfied himself that no large artery lay close by, and with the position of nerves he did not occupy himself. But, somehow or other, the unfortunate barman has now a wasting of the inner side of the forearm and of the muscles of the little finger. His metacarpal bones, now unsupported by

interosseous muscles, stand up in sad relief, whilst nothing is to be found between the metacarpal bones of the thumb and index finger but a flabby web of tissue—a poor representative of the abductor indicis and the abductor pollicis. Sensation in the parts supplied by branches of the ulnar nerve is but slightly affected. Possibly these fibres escaped complete division. The man says that he suffers from "pins and needles" in the hand occasionally, and the skin is extensively chapped and fissured; but this latter condition obtains also in the unaffected hand, being due to the peculiarities of his trade.—*British Med. Journal.*

Dislocation of both Hips.—Dr. J. B. Crawford, (*American Journal of the Medical Sciences*, October, 1876), was called on July 13th, to see Thomas Jones, a large and powerful man, aged about thirty, who had been injured four or five hours previously while working in a coal-mine by a mass of rock from the roof falling upon him. Upon examination, a dislocation of both hips was found; the head of the right femur rested upon the dorsum of the ilium, the leg was flexed upon the thigh, the knee lay upon the lower portion of the opposite femur, and the toes were turned strongly inwards. The head of the left femur was displaced into the ischiatic notch. The limb was nearly straight, the thigh being but slightly flexed, the knee nearly unbent, and the toes inverted. The lower portion of the spine was strongly arched. The amount of shortening could not be ascertained. The amount of deformity of the hips was less conspicuous than is usual in single dislocations of the same kind.

The patient was thoroughly anæsthetised, and the reduction effected by manipulation. First flexing the left leg upon the thigh and the thigh upon the pelvis, Dr. Crawford pressed the thigh obliquely across the abdomen, at the same time rotating the femur, using the leg as a lever, and then carrying the knee across to the left side, lifted the thigh to a right angle with the body, and made moderate vertical traction; when after dislodging the head of the bone from the sciatic notch, it glided readily and noiselessly into its proper place. Considerable force with rotation of the femur, was required to carry the flexed thigh across from the right to the left side of the abdomen; all the other movements were effected with comparative ease. Not more than two minutes were occupied in the process. The reduction of the remaining luxation was attended with more difficulty. Dr. Crawford first moved the limb in the line of its easiest motion; flexing the leg upon the thigh, and the thigh upon the pelvis, as before, carrying the knee well upward and obliquely across the median line of the body. Then attempting to abduct

while rotating the limb, he found the movement in that direction suddenly arrested. Again, pressing the thigh firmly upon and obliquely across the abdomen, and abducting and rotating as before, he succeeded in disengaging the head of the bone and bringing it apparently to the posterior border of the acetabulum; but upon bringing the limb down to a horizontal position, the head of the femur had returned to its former situation upon the dorsum ilii. The manipulations, varied somewhat, were repeated several times with the same result. Finally, having brought the head of the femur to the posterior border of the acetabulum, and finding it again arrested at the edge of the socket, Dr. Crawford directed the pelvis to be held firmly down by two assistants while he made strong upward traction upon the thigh bent at a right angle with the body. In about a quarter of a minute the dislocated bone returned to its socket with a sound that was heard distinctly. The patient left his bed ten days after the reception of his injury, and walked about the ward with but slight difficulty.

The records of surgery furnish but a very few examples of simultaneous dislocation of both hips. Dr. Gross in his "System of Surgery" says that the accident is exceedingly uncommon, and mentions but three instances of its occurrence—one recorded by Professor Gibson, one by Cooper, of London, and one which occurred in the practice of Dr. Boisnot, of Philadelphia. Hamilton, in his work on "Fractures and Dislocations," mentions only a single example of this injury, that of Professor Gibson. Each of these cases, where the particulars are given, differed from the others, as well as from the one here recorded, in regard to the character of the dislocation; in one the displacement being illiac and thyroid, in the other illiac and pubic, while the one here recorded was illiac and sciatic.

The subject of the present report told Dr. Crawford that he was at work, standing on a surface which inclined at an angle of about forty degrees, with the feet widely separated, the right one being much lower than the left, and the body bent forward. While he was in this position, a large mass of rock, weighing many hundred pounds, fell from the roof several feet above him, striking him in the lower dorsal region, bending the thighs upon the body and pressing him forcibly down upon the rock on which he was standing. He was certain that both joints were dislocated at the same instant, as the falling rock immediately rolled or slid from and released him. Severe bruises upon his back and a deep cut on the right arm, were the only other injuries received.—*London Medical Record.*

CANADA

Medical and Surgical Journal.

MONTREAL, JANUARY, 1877.

THE ACT OF AMENDMENT RELATING TO THE PRACTICE OF MEDICINE IN THE PROVINCE OF QUEBEC.

We have delayed publishing our *Journal* with a view of laying before our readers the act just passed by the Local Legislature to amend and consolidate the acts relating to the practice of medicine and surgery in the Province of Quebec. We are only able to give a translation of the act, for, strange to say, we have been furnished with a copy of the bill in the French language, and although we sought to obtain an English copy, so far it has been withheld.

There may be some few technical errors in what we publish, but we will keep the type standing, and should there be any errors or omissions of importance, we shall have them corrected so soon as the act appears or is published by the Legislature, and shall furnish our readers with it. Some disappointment may be felt by the profession generally that a central board of examiners, or a single door of entrance into the profession, does not form the prominent feature of this art. Such was, indeed, the character of the bill submitted to the Legislature by the College of Physicians and Surgeons of Lower Canada, and such was the very generally expressed wish of the profession. We should gladly have seen that method of entrance into the profession adopted in this act. The University of Laval, however, submitted before the Committee of the House, to whom the bill had been referred, its Royal Charter, and held that its rights could not be disturbed by Local Legislative enactment. This, of course, would have involved questions of law, which, had they been gone into, and argued upon by counsel, would have delayed or perhaps completely burked legislation, as the session was drawing to a close. It was thought better, therefore, to accept a compromise, and a sub-committee was struck, composed of

members of the House, delegates from the Universities, representatives of the College of Physicians and Surgeons, and representatives of the French-Canadian Medical Society of Montreal, who drew up and submited the bill which we publish, and which, with some few alterations, received the sanction of the Lieutenant-Governor, after having passed both Houses of the Legislature.

The changes in the law are very important; and we may hope that, in the course of a few years, if efficiently worked, the profession will be in a far better condition than it is at present. It will be observed that the schools retain the right of granting diplomas, which will entitle the holder to registration on payment of fees; but the graduate must give evidence of having studied his profession during a period of four years, during three of which he will be required to attend the lectures of some university or college or incorporated school of medicine recognized by the Board of Governors. The preliminary qualifications of the student must be testified to by his having passed a satisfactory examination before examiners appointed by the college, and this examination must precede his entering on his professional studies. To ensure efficient teaching and examinations by the schools, the Provincial Medical Board shall appoint assessors, two or more of whom shall visit the universities and colleges and incorporated schools during their examinations, and shall report to the Board of Governors the character of those examinations; and in case those duties are not efficiently performed, the Board of Governors shall have power to refuse registration to candidates from that school against whom an adverse report has been made. These are the principal features of the act as regards preliminary and professional education. The act, moreover, provides for a general registration of all members of the profession practising medicine, surgery and midwifery in the Province of Quebec This has to be complied with within twelve months of the passing of the act; neglect on the part of any practitioner of medicine to comply with the law in this particular, renders him liable to a fine and to be deprived of all civil rights as a medical practi-

tioner so long as he remains unregistered. Article XXI. is very specific on this point. There are some other points about this act, of importance to the profession. But we lay the whole matter before our subscribers, with a view of eliciting discussion and that the members of the profession may be prepared to meet its requirements and carry out its provisions.

An act to amend and consolidate the acts relating to the profession of medicine and surgery in the Province of Quebec.

I. Whereas the laws now in force in the province of Quebec, for regulating the qualifications and examination of candidates for the study of medicine, surgery and midwifery; for the registration of medical practitioners, and for the infliction of penalties upon persons infringing the provisions of the Medical Act respecting the practice of medicine, surgery and midwifery, require amendment; Be it therefore enacted by the Queen's most excellent majesty, by and with the advice and consent of the legislative council and of the legislative assembly of the Province of Quebec, and it is hereby enacted by the authority of the same, that from and after the passing of this act, the act or ordinance of the legislative council of the late Province of Quebec, passed in the twenty-eighth year of the reign of his late majesty King George the third, and entituled, *An act or ordinance to prevent persons practising physic and surgery within the Province of Quebec, or midwifery within the towns of Quebec and Montreal, without license*, and all other acts or part of acts in any manner relating to the practice of medicine, surgery and midwifery in the Province of Quebec, or in any manner relating to the mode of obtaining licenses to practice medicine, surgery or midwifery therein, shall be and are hereby repealed, except in so far as relates to any offence committed against the same or any of them before the passing of this act or any penalty or forfeiture incurred by reason of such offence.

II. And whereas it is expedient that the medical profession of the Province of Quebec, be empowered under certain restrictions to frame its own statutes for the regulation of the study of medicine in all its departments, and by-laws for its own government; be it therefore enacted. That all persons resident in Lower Canada and licensed to practice medicine, surgery or midwifery therein at the time of the passing of the present act, and all persons who may hereafter obtain a license to practice

medicine, surgery and midwifery in this Province, shall, and are hereby constituted a body politic and corporate by the name of *The College of Physicians and Surgeons of the Province of Quebec*, and shall by that name have perpetual succession and a common seal, with power to change, alter, break or make new the same; and they and their successors by the name aforesaid may sue and be sued, implead and be impleaded, answer and be answered unto in all courts and places whatsoever, and by the name aforesaid shall be able and capable in law to have, hold, receive, enjoy, possess and retain for the ends and purposes of this act and for the benefit of the said college, all such sums of money as have been or shall at any time hereafter be paid, given or bequeathed to and for the use of the said college; and by the name aforesaid shall and may at any time hereafter, without any letters of mortmain, purchase, take, receive, hold, possess and enjoy any lands, tenements or hereditaments or any estate or interest derived or arising out of any lands, tenements or hereditaments for the purposes of the said college and for no other purposes whatever; and may sell, grant, lease, demise, alien or dispose of the same, and do and execute all and singular the matters and things that to them shall or may appertain to do; provided always that the real estate so held by the said corporation shall at no time exceed in value the sum of $20,000.

III. And be it enacted, That from and after the passing of this act, the persons who compose the college of physicians and surgeons shall be styled Members of the College of Physicians and Surgeons of the Province of Quebec."

IV. And be it enacted, That the affairs of the said college shall be conducted by a board of governors, forty in number, and elected for three years—fifteen of whom shall be elected from among the members of the college, resident in the district of Quebec; nineteen from among its members resident in the district of Montreal; three from among its members resident in the district of Three Rivers; and three from among its members resident in the District of St. Francis: and of the said Board of Governors neither more nor less than eight shall be resident in the city of Quebec, and neither more nor less than eight in the city of Montreal; Provided always that not less than two members out of the city members shall be delegates from each of the universities, colleges and incorporated medical schools now existing in the Province of Quebec, to wit: The University of Laval, the University of McGill, the University of Bishop's College, and the Incorporated School of Medicine and Surgery.

Montreal, affiliated with the University of Victoria College, or with any other British University; and that at each election of the board of governors, every member of the said corporation shall have the right of voting by proxy.

2. Of the aforesaid districts, the district of Quebec shall comprise the present judicial districts of Quebec, Gaspé, Saguenay, Chicoutimi, Rimouski, Montmagny, Beauce, and Kamouraska; the district of Montreal, shall comprise the present judicial districts of Montreal, Terrebonne, Joliette, Richelieu, Bedford, St. Hyacinthe, Iberville, Beauharnois and Ottawa; the district of Three Rivers shall comprise the present judicial districts of Three Rivers and Arthabaska, and the district of St. Francis shall consist of the present judicial district of St. Francis.

3. The members of the board of governors shall be elected for a period of three years, but any member may resign his appointment at any time by letter addressed to the Secretary of said board, and upon the death or resignation of any member of the said board, it shall be the duty of the Secretary forthwith to notify the university or body wherein such vacancy may occur, of such death resignation or removal, and such university or body shall have the power to nominate another duly qualified person to fill such vacancy, or if the vacancy be caused by the death, resignation or removal from the electoral city or district of any member elected from the electoral districts or cities, the board of governors shall fill up such vacancies from amongst the eligible members of the college in the city or district where such vacancy shall have occurred by an election by ballot at the next ensuing meeting subsequent to the occurrence of such vacancy, and it shall be lawful for the board of governors to exercise during such vacancy the powers of the board hereinafter mentioned.

V. The said board of governors shall be, and are hereby constituted, "The Provincial Medical Board," in which capacity they shall meet *to perform the several duties devolving upon them under this act as the board of Governors of the College*, not less than twice in each year, at such time and place as by them shall be deemed most fit, and on which occasions, seven shall be a quorum for the transaction of business.

VI. And be it enacted that from and after the passing of this act, no person shall practice medicine or surgery, or midwifery, in the Province of Quebec, unless he shall have obtained a

license from the Provincial Medical Board; who are hereby authorised to issue such license.

VII. Be it enacted that every person who has obtained or may hereafter obtain a medical degree or diploma, in any university or college mentioned in section IV of this act shall be entitled to such license without examination as to his qualifications. Provided always that the Provincial Medical Board shall have the power and option of extending the same privilege to the holders of Medical degrees and Diplomas of other British and Colonial Universities and Colleges.

VIII. And be it enacted, that from and after the passing of this act, no person shall be admitted as a student of medicine, surgery or midwifery, unless he shall have obtained a certificate of qualification from the Provincial Medical Board, and no one shall be entitled to the license of the college on the presentation of Diploma unless he shall have been previously admitted to the study of medicine in accordance with the provisions of this act, or unless he has passed an equivalent preliminary examination before an authorized College or Licensing Board in Her Majesty's Dominions, acceptable to the Board created by this Act.

IX. At the first regular meeting of said Board after the passing of this act, there shall be appointed by the Provincial Medical Board for three years [subject to the continual approval of the Board,] four persons actually engaged in the work of general education in the Province of Quebec, to examine all persons about to begin the study of medicine, surgery and midwifery, on the subjects of general education hereinafter mentioned as belonging to the preliminary qualification of medical students, viz; one examiner skilled in the French language and one skilled in the English language for the City of Montreal, and one skilled in the French language and one skilled in the English language for the City of Quebec. The subjects of the preliminary qualification to be English and French, Latin, geography, history, arithmetic, algebra, geometry and any one of the following subjects, Greek, natural or moral philosophy; and the candidate to present a certificate of good moral character. Provided that all medical students who before the passing of this act shall have passed their preliminary examination before the examiner or examiners of any university, or incorporated school, or provincial medical board, shall not be required to pass before the examiners mentioned in this section.

X. Every person wishing to obtain a licence to practice medicine, surgery and midwifery in this province, and to be

registered under this act, and who shall not have obtained a degree or diploma in medicine surgery and midwifery from any of the institutions mentioned in clause four of this act, shall *before being entitled to such license* and to *registration* in this province, *pass an examination* as to his knowledge and skill for the efficient practice of medicine, surgery and midwifery, before the examiners appointed by *this board;* and upon passing the examination required, and proving to the satisfaction of the examiners that he has complied with the rules and regulations made by the provincial board, and on payment of such fees as the board may by a general by-law establish: such person shall be entitled to a licence to practice medicine surgery and midwifery in the Province of Quebec.

XI. And be it enacted, That the said board of governors of the college of physicians and surgeons shall have power:—

1. To regulate the study of medicine, surgery and midwifery, by making rules with regard to the preliminary qualification, duration of study, curriculum to be followed, and the age of the candidate, applying for a license to practice: Provided always that such rules shall not be contrary to the provisions of this Act.

2. To examine all credentials purporting to entitle the bearer to a license to practice, and all degrees or qualifications sought to be registered in this province, and to oblige the bearer of such credentials, degrees or qualifications to attest on oath, to be administered by the chairman for the time being, that he is the person whose name is mentioned therein, and that he became possessed thereof legally.

3. To cause every member of the profession now practising, or who may hereafter practise in the Province of Quebec, to enregister his name, age, place of residence, nativity, the date of his license and the place where he obtained it, in the books of the College.

4. To fix the period of probation which persons must undergo before being eligible for election as governors of the college, which period shall not be less than four years, and to make all such rules and regulations for the government and proper working of the said corporation and the election of a president and officers thereof, as to the board of governors may seem meet and expedient, which said rules and regulations shall, before they shall come into effect, be sanctioned by the lieute-

nant-governor in Council of this Province after the same shall have been submitted to him for approval and by him allowed.

XII. The " provincial medical board " ;

1. Shall from time to time, as occasion may require, make rules and regulations for the guidance of the " examiners," and may prescribe the subjects and mode of the examinations, the time and place of holding the same, and generally may make all such rules and regulations in respect to such examinations not contrary to the provisions of this act, as they may deem expedient and necessary.

2. It shall regulate the study of medicine, surgery and midwifery by making rules with regard to the preliminary qualifications, duration of study, curriculum of studies to be followed by the students.

Provided always that such rules shall not be contrary to the provisions of this act, and that any change in the curriculum of studies fixed by the board shall not come into effect until one year after such change is made.

3. It shall have power to make tariffs of rates to be charged in towns and country for medical, obstetrical or surgical advice, or for attendance—or for the performance of any operation or for any medicines which shall have been prescribed or supplied.

4. It shall appoint assessors not of its own body but from among the registered members of the college, to visit and attend the Medical Examinations of the various Universities, Colleges, and Incorporated Schools, of the province and to report to the Provincial Board upon the character of such examinations, such assessors must not be chosen from the professors of any of the said universities, colleges or incorporated schools ; and should such report be at any time unfavorable to any university, college, or incorporated school, the Provincial Board shall in such case and under such circumstances have the power to refuse the registration of the degree or diploma of the institution so reported upon, until such examination shall have been amended.

That for such purpose the Provincial Board shall appoint or elect assessors, two or more of whom shall attend the examinations at each University, College or Incorporated Medical School.

5. It shall be the duty of the above institutions to notify the Provincial Board of the time or times at which their examina-

tions shall be held, at least one month previous to such examinations.

XIII. The Provincial Medical Board shall have the power to fix by by-law the salary or fees to be paid to the "officers," and to the "examiners" and assessors appointed by the said board; as well, also, the fees to be paid by all candidates entering on the study of medicine, as also by all candidates for the license to practice medicine, surgery, and midwifery, as well as the fee to be paid for registration; and the said board may dispose of all fees received in whatever manner they may think most conducive to the interests of the college.

XIV. And be it enacted, That the qualifications to be required from a candidate for examination to obtain a licence to practise shall consist in his not being less than twenty-one years of age; that he has followed his studies uninterruptedly during a period of not less than four years, commencing from the date of his admission to the study of medicine by this board, and that during the said four years he shall have attended at some university, college or incorporated school of medicine, within Her Majesty's dominions, not less than two six months' courses of general or descriptive anatomy,—of practical anatomy—of surgery—of practice of medicine—of midwifery—of chemistry—of materia medica and general therapeutics, of the institutes of medicine or physiology and general pathology, of clinical medicine and of clinical surgery,—one six months' course or two three months' courses of botany,—one three month's course of hygiène and a course of not less than twenty-five demonstrations upon microscopic anatomy, physiology and pathology also, that he shall have attended the general practice of an hospital in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons for a period of not less than one year and a half, or three periods of not less than six months each; and that he shall also have attended six cases of labour, and compounded medicine for six months. And to remove all doubts with regard to the number of lectures which the incorporated schools of medicine of the Province of Quebec are bound to give, be it enacted and declared that each six months' course shall consist of one hundred and twenty lectures, except in the case of clinical medicine, clinical surgery, and medical jurisprudence. Of the four years study required by this act, three six-months sessions, at least, shall be passed in attendance upon lectures at a university, college, or incorporated school of medicine recog-

nised by this Board, the first whereof shall be so passed the year immediately succeeding the preliminary examination.

XV. And be it enacted, That all persons obtaining the license to practice from the College of Physicians and Surgeons of the Province of Quebec, shall be styled members of the said college, but shall not be eligible as governors within a period of four years from the date of their admission as members ; and the said election as governor shall be made under such rules and regulations therefor, and in such manner as the said Board of Governors shall ordain. Members of the college shall pay the sum of two dollars a year for the use of the college.

XVI. The Provincial Medical Board shall have the power to make rules and regulations respecting the admission of females to the practice of midwifery in this province.

XVII. The Provincial Medical Board shall cause to be kept by the registrar a book, or register, to be called the Register, in which shall be entered, from time to time, the names of all persons who have complied with the enactments hereinafter contained, and with the rules or regulations made or to be made by the Provincial Medical Board respecting the qualifications to be required from practitioners of medicine, surgery and midwifery in the Province of Quebec ; and those persons only whose names have been or shall hereafter be inscribed in the register above-mentioned, shall be deemed to be qualified and licensed to practice medicine, surgery and midwifery in the Province of Quebec ; and such register shall at all times be open and subject to inspection by any duly registered practitioner in the province, or by any other person.

XVIII. If shall be the duty of the Registrar to keep the register correct in accordance with the provisions of this act and the orders and regulations of the Provincial Medical Board, and he shall from time to time make the necessary alterations in the addresses or qualifications of the persons registered under this act ; and the said Registrar shall perform such other duties as shall be imposed upon him by the Provincial Medical Board.

XIX. If the Registrar shall wilfully make, or cause to be made, any falsification in any matters relating to the register, he shall incur a penalty of one hundred dollars, and shall be disqualified from again holding any office in the college.

XX. Every member of the medical profession who, at the time of the passing of this act, may be possessed of a *license*

from the College of Physicians and Surgeons of Lower Canada to practice medicine, surgery and midwifery in the Province of Quebec, shall, on the payment of the fee of one dollar, be entitled to be registered on producing to the Registrar the document conferring or evidencing the qualification, or each of the qualifications in respect whereof he seeks to be so registered, or upon transmitting by post to such Registrar information of his name and address, and evidence of the qualifications in respect whereof he seeks to be registered, and of the time or times at which the same was or were respectively obtained, *provided he register within one year* after the final passing of this act.

XXI. Any person entitled to be registered under this act, but who shall neglect or omit to be so registered, shall not be entitled to any of the rights or privileges conferred by this act so long as such neglect or omission continues ; and he shall be liable to all the penalties imposed by this act, or by any other act which now may be in force against unqualified or unregistered practitioners, and he shall pay a fine of five dollars every year until he is registered.

XXII. No person shall be entitled to recover any charge in any court of law for any medical or surgical advice, or for attendance, or for the performance of any operation, or for any medicine which he shall have prescribed or supplied, nor be entitled to any of the rights or privileges conferred by the provisions of this act, unless he shall prove upon trial that he is registered under this act and has paid his annual contribution to the college.

XXIII. No certificate required by any act now in force or that may hereafter be passed in this province from any physician or surgeon or medical practitioner, shall be valid unless the person signing the same be registered under this act.

XXIV. Any registered member of the medical profession who shall have been convicted of any felony in any court shall thereby forfeit his right to registration, and, by the direction of the Provincial Medical Board, his name shall be erased from the register ; or in case a person known to have been convicted of felony, shall present himself for registration, the Registrar shall have power to refuse such registration.

XXV. 1. Any person not entitled to be registered in this province, who shall be convicted upon the oath of one or more witnesses in accordance with the provisions of 38 Vict., Chap.

25 of this province, of having practised medicine, surgery or midwifery in the Province of Quebec, for hire, gain, or hope of reward shall, upon summary conviction before a sheriff, or district magistrate or recorder, or judge of the sessions of the peace be condemned to pay a fine of not less than $25, nor exceeding $100.

2. A like penalty shall be incurred by every person assuming the title of doctor, physician, or surgeon, or any other name implying that he is legally authorized to practice medicine, surgery, or midwifery, in this province, if unable to establish the fact by legal proof; and every person who by advertisement in any newspaper or by printed or written circulars, or by card, or by sign boards assumes any addition, name or description implying or calculated to lead persons to infer that he or she is a duly registered or qualified practitioner of medicine, surgery, and midwifery, or any one of them, or any person offering or giving his or her services as physician, surgeon, or midwife, if not duly licensed and registered in this province, shall in each such case be liable to be condemned to a like penalty.

3. In every prosecution under this act, the proof of registration shall be incumbent upon the prosecuted.

4. All prosecutions under this act, shall take place before any sheriff, or district magistrate, or recorder, or judge of special sessions of the peace having jurisdiction in the locality where the offence was committed, and, such sheriff, or district magistrate, or recorder or judge of special sessions of the peace, besides the penalty above mentioned, shall have power to condemn in costs ; and in the event of the costs or the penalty not being paid, to order an imprisonment for a term not exceeding thirty days, unless the penalty or costs be sooner paid.

XXVI. 1. And be it enacted that the penalties imposed by this Act, shall be recoverable with costs and that the same may be sued for and recovered by the said College of Physicians and Surgeons of the Province of Quebec, by its incorporate name, and being recovered shall belong to the said corporation for the use thereof.

And neither in any such suit or in any other civil action to or in which the said corporation may be a party or interested, shall any member of the corporation be deemed incompetent as a witness by reason of his being such member.

2. All penalties recoverable under this Act, shall be paid over to the court convicting, and by the latter, to the treasurer of the Provincial Medical Board. The Provincial Board may authorize any person to prosecute in his own name, any person for any infringement of this Act, and the Provincial Medical Board shall have power to allow the prosecutor the whole or a portion of the penalties recovered.

XXVII. In all cases where proof of registration under this Act is required, the production of a printed or other copy of the register, certified under the hand of the Registrar of the College of Physicians and Surgeons of the Province of Quebec, for the time being, shall be sufficient evidence that all persons therein named are registered practitioners, in lieu of the production of the original register ; and any certificate upon such printed or other copy of the register, purporting to be signed by any person in his capacity of Registrar of the College under this Act, shall be *prima facie* evidence that such person is such Registrar, without any proof of his signature, or of his being in fact such Registrar.

XXVIII. The present Board of Governors elected under the provisions of the acts herein before repealed shall be continued and shall act until after the next triennial election, but subject in all other respects to the provisions of this Act ; and all by-laws, rules and regulations heretofore made by the said College of Physicians and Surgeons of Lower Canada shall remain in force until repealed or modified under the provisions of this Act.

XXIX. The officers appointed under the provisions of the acts repealed, shall retain their respective offices, and perform their respective duties under the provisions of this Act, and all books and registers heretofore kept by them in conformity with the acts hereby repealed, shall be continued in use for their respective purposes under this Act.

XXX. The College of Physicians and Surgeons of the Province of Quebec, is hereby vested with all the rights, powers, privileges property and assets heretofore belonging to the College of Physicians and Surgeons of Lower Canada.

XXXI. Nothing in this Act contained shall be construed to affect the rights of any persons under the provisions of Act 28 Vict., Chap. 59, and amendments thereto 29 Vict., Chap. 59.

CANADA
MEDICAL & SURGICAL JOURNAL

Original Communications.

CASE OF EPITHELIOMA OF TONGUE;

Excision of the entire organ by Galvanic Ecraseur. Followed by deep suppuration and Death.

UNDER DR. ROSS. REPORTED BY MR. JOHN BRODIE.

(Read before the Medico-Chirurgical Society, Montreal.)

J. L., æt. 36, single, was admitted into the Montreal General Hospital on the 20th October, 1876, complaining of a sore on his tongue. Is a slim, slight-built man, 5 feet 6½ in. in height; weight 120 lbs. Born in Scotland, came to this city 18 months ago and has been employed as storeman in a wholesale stationer's establishment. Parents are both alive and healthy, also several brothers and sisters. Carefully enquired into, his family history shows no trace of either tubercular or cancerous taint. He has never had syphilis. Is of very regular habits, and has always been healthy. Smokes considerably and generally uses a short clay pipe.

His present trouble began seven months ago as a hard pimple with a double crown on the upper margin of the right side of the tongue about opposite the second molar tooth. This gradually increased without pain until about four months ago, when it began to get painful, with pains occasionally shooting from the pimple towards the angle of the jaw. About this time an ulcer formed on the under surface of the tongue a little further back

than the original induration. Since then the induration has been rapidly extending into the structure of the side of the organ and the ulcer has advanced towards the apex of the tongue. Within the last three weeks the swelling and ulceration have resulted in fastening the tongue down to the floor of the mouth in such a way as to interfere with articulation. There is considerable salivation, and the breath is somewhat fœtid.

Heart and lungs examined and found normal. Urine of normal amount and free from albumen and sugar.

On examining the tongue it is found to be unsymmetrical, owing to the presence of a large firm induration occupying the right side and extending from near the base to the apex. It is somewhat nodulated, and terminates abruptly near the root of the tongue. Much the greater portion of it is contained in the right half of the tongue, but about the middle it encroaches upon the left half and then extends almost to the left edge. Beneath the right margin of the tongue, at its junction with the floor of the mouth, is a deep, excavating ulcer, with sharp edges and a sloughing, unhealthy base. The submaxillary gland on the right side is considerably enlarged and slightly tender on pressure. There is also one enlarged cervical gland just behind the angle of the jaw. This gland is as large as a small walnut, quite hard, painful on pressure, and adherent to the deep fascia.

The diagnosis was that of malignant disease with very slight involvement of the neighboring lymphatic glands, and the opinion was held that the case was a suitable one for excision of the tongue. The patient was seen by several members of the attending and consulting staff of the Hospital, and the above view being unanimously supported, the operation was decided upon.

1*st Nov.*—Operation by Dr. Ross ; Drs. Drake and Roddick assisting. The patient having been thoroughly anæsthetized with ether, an incision was made in the median line through the entire thickness of the lower lip, and carried down through the skin and subcutaneous tissues as far as the hyoid bone. The divided vessels were secured with catgut ligatures, cut short.

A small saw was then applied (an incisor tooth having been previously extracted) and the lower jaw was divided at the symphysis. The muscles of the mouth were somewhat dissected away, so that the divided fragments could be widely separated. The tongue was transfixed by a strong loop of cord, and drawn well forward. A thin platinum wire was then made to encircle the entire tongue, being pressed back nearly to the epiglottis behind and well beneath the floor of the ulcer on the side. The small ecraseur to which the wire was attached, was then drawn moderately tight, and the galvanic circuit was closed. The battery used was one of zinc and carbon, in a solution of bichromate of potash and sulphuric acid. Cauterization began immediately and the wire was cautiously drawn through. Ten minutes was occupied in completing the division. There was no hæmorrhage, the whole floor of the mouth having been completely seared. The operator now proceeded to fasten the divided jaw together again and keep it in its place. In this proceeding valuable assistance was rendered by Mr. G. W. Beers, Dentist, who was present for the purpose, and who, by means of a dentist's drill worked with a treadle, rapidly bored two holes through the bone, one on either side — wires were passed through these and twisted tightly together. The teeth were also wired together. This kept everything tightly in its place. The original incision was then closed in the usual manner by harelip pins and catgut sutures.

Nov. 2nd.—Feels very comfortable but did not sleep, although he had gr ¼ of morphia hypodermically at night. Swallows well. Pulse 88 ; temperature 100.4°.

Nov. 3rd.—Slept well ; feels comfortable and swallows well. External wound closing nicely by first intention. Floor of the mouth covered with a soft, greyish slough, which is commencing to separate in places. Pulse 92 ; temperature 99.4°.

Nov. 4th.—Rested well during the early part of the night, but towards 4 a.m., had a severe fit of coughing, followed by some hæmorrhage into the mouth. It was bright blood and pretty rapidly flowing at the time but was controlled readily by ice. Is very comfortable to-day, and is swallowing easily and

freely an abundance of fluid nourishment and drinks. Pulse 92 ; temperature 101°.

Nov. 6th.—Last evening he became a little uneasy and a slight swelling was noticed over the situation of the enlarged gland on the right side of the neck already mentioned. This has now considerably increased, so that the whole of the upper part of the right side of the neck is swollen and tender on pressure. At 2 this a.m. there was another slight hæmorrhage, lasting, however, only about 5 minutes, and apparently coming from the centre of the floor of the mouth. Since that time he has found difficulty of swallowing increasing, so that now he cannot swallow at all. The pillars of the fauces and uvula are much swollen, especially upon the right side, where also a greyish, dirty-looking exudation is to be seen. The main slough is separating everywhere, and tending to come away in shreds. Ordered enemata of beef-tea and brandy to be given every 3 hours. Pulse 100 ; temperature 102°.

Nov. 8th.—Inability to swallow has continued complete. Is restless but has no pain. The swelling on the side of the neck has increased a good deal. It is hard and brawny and extends completely round to the spine behind. Several incisions were made through the skin and cellular tissue, and a poultice applied. Pulse 130 and getting very weak ; temperature 101.5° Fahr.

Nov 9th.—Cannot swallow. Breathing somewhat stridulous. Superficial veins on the right side of the chest are enlarged. The whole remaining slough was removed this morning from the floor of the mouth. Last evening attempts were made to feed him by a catheter passed through the nostril. It was passed down the œsophagus with considerable difficulty, and beef-tea and brandy injected into the stomach. Pulse 140 ; very weak. Evidently sinking.

Died at 1 a.m. on the 10th November.

Autopsy.—36 hours after death by Dr. Osler. Neck swollen in anterior and lateral regions. Recent cicatrix in lower lip and chin. *Left lung* extends across the heart, and is attached to the pericardium. Tissues beneath the manubrium sterni infiltrated with *pus*. *Pericardium* contains a small amount of

clear amber-coloured fluid. *Right Ventricle* contains two large colourless polypi, firm and closely adherent to the walls and extending into the pulmonary artery and the tricuspid orifice. Valves healthy.

Lungs.—Left adherent in places, crepitant throughout. Right, strongly coloured in places, crepitant at anterior border and base. Middle lobe and part of upper, firm, and the surface on section bathed with a sero-sanguineous fluid. One small purulent focus at the external part of middle lobe, not a definite collection of pus, but an area of the lung, 1″ x ¾″ irregularly infiltrated.

Nothing of importance in any of the other organs.

The tissues of the neck beneath the deep fascia, principally on the right side, and in front were uniformly infiltrated with pus, this fluid having also penetrated the anterior mediastinum, and passed beneath the sternum. There was no definite or circumscribed collection of pus anywhere. The interior of the larynx was healthy. The floor of the mouth was composed of a granulating surface, from which apparently a slough had recently been separated.

ON THE USE OF THE ASPIRATOR IN HYDROTHORAX

By F. D. Gilbert, M.D., M.R.C.S., Eng.

Thinking the following case may prove interesting, if not instructive, I venture to send it for insertion in the *Journal*.

On the 21st September, 1875, I was called in the night to see a lad named John Ross, who had been ill for some ten or eleven weeks, and was represented as in a dying condition. When I arrived I found him propped up in a chair, having been unable to lie down for the previous two or three weeks. Breathing very short and gasping. Œdema of both legs and feet, as also of the general integuments of the abdomen and chest walls, a rapid, weak, thready pulse, almost unable to speak. On physical examination of the chest I found a very weak respiratory murmur on the left side, and none whatever in any part of the right lung. The heart was pushed completely over on the left

side, and very distinct bulging of the intercostal spaces on the right side existed. As there was evidently no time to lose, if the patient's life was to be saved, I deemed it a very suitable case to test a theory I had propounded to myself as to the superior advantages of the aspirator in such cases, in the creation of a vacuum in the pleural cavity, which, I believe, ought to assist in breaking down recent adhesions, and in other respects, aid in the inflation of the compressed lung.

I therefore immediately returned home and procured the instrument and inserted the trochar above the upper edge of the eighth rib, at its most prominent posterior aspect, and drew off pretty rapidly, *i. e.*, in ten or fifteen minutes, nearly eleven pounds of clear serum, instead of evacuating it gradually, as formerly advised by the best authorities.

The patient, who was a small, delicate boy, directly the cavity was exhausted began to cough pretty severely, and I could distinctly hear a slight vesicular murmur returning in the lung. I gave him at once 10 grains of Dover's powder and he was soon able to lie down, and enjoyed several hours' good sleep, the cough abating. In the morning I visited him again and gave him the following mixture every three hours, with seven grains of Dover's powder each night at bed-time, viz: cincho-quinine gr. j, acidi hydrochlorici mj, tincture digitalis mvj, aceti scillæ mv, spirit ether. nitrici mxv, syrup ℥i, aquae ℥ij. Ordered frequent tepid sponging and frictions over the whole body and extremities, with a light nutritious diet, and plenty of milk. He made an excellent recovery, and there was absolutely none, or at least no appreciable return of effusion, and in about five weeks he was convalescent, but with an inferior respiratory murmur on the right side, and a little falling in of the chest parietes owing, I have no doubt, to old adhesions. About the end of November following, I was visiting a patient in the neighborhood on a cold, rainy day, and saw the boy in the street without coat or hat on playing with other lads. I sent him home at once, telling him if he did not take better care of himself, I should soon have trouble with him again. On the 1st of January 1876, a messenger came in the evening, saying the boy's chest was

filled up again as badly as before. I went at once taking my aspirator with me, and found him about as the messenger had described, as to the distress and difficulty of breathing, though not so exhausted as before ; but you may judge my surprise when I found it was the left pleural cavity that was now filled, instead of the right, and that the right lung was all he had to use, the left being completely compressed and all air excluded from it. I at once used the aspirator as before, excepting of course, introducing the trochar on the left side, with the result of evacuating 8½ lbs, of fluid, and treated the case precisely as I had previously done, with even a better result, as convalescence was procured without any subsequent effusion in about three or four weeks, and in addition I had the satisfaction of finding the right lung had (I presume from the extra hard work it had been compelled to perform), very materially resumed its respiratory power. Now, as I have never met with anything approaching so satisfactory results in similar cases by the old method of slowly evacuating the fluid, I think I am justified in the belief that the sudden withdrawal of the fluid and consequent formation of a large vacuum, had considerable influence in the production of the favorable result. I may perhaps add another peculiarity in this boy's case. In August last I was called to see him again, and found him very ill indeed, with large peritoneal effusion, jaundiced and very emaciated and so weak that I hesitated considerably as to the expediency of tapping him, but finally concluded to give him the benefit of the doubt, and try medicinal treatment first. I therefore gave him calomel gr. viij, and pulv. jalapæ co. ℥i at once, which procured several large watery discharges, with evident relief to all his symptoms. I then gave him the following prescription: viz. pil. hydrarg. gr. iv., pulv. scillæ gr. iss ; pulv, digitalis gr. ¾, night and morning, with the following mixture three times a day : ℞. cincho-quinine gr. iss, acidi nitrici miij, aceti scill mvj, spts ether. nitrici m xx, syrupi ℥i, aquæ ℥ij, under which treatment the whole effusion became quickly absorbed, and he again made a good recovery, and so far has remained well.

Sherbrooke, Jan. 22nd, 1877.

Hospital Reports.

Medical and Surgical Cases Occurring in the Practice of the Montreal General Hospital.

Case of Progressive Muscular Atrophy. Treated without result by pure Phosphorus—Under the care of Dr. Ross. Reported by Mr. G. E. Armstrong.

T. P., æt 54, unmarried, was admitted into the Montreal General Hospital on the 17th October, 1876, suffering from complete loss of power and wasting of the muscles of both arms, and great debility, with wasting of the lower extremities.

When a young man, was tolerably healthy. Has had attacks of ague several times, and has taken a good deal of quinine. Has always been of steady habits, drank but little liquor and smoked very moderately. Never indulged in venereal excesses. About 12 years ago had necrosis of the right femur, and several pieces of bone came away through fistulous openings. At this time he took a good deal of calomel, and also contracted the habit of taking laudanum pretty freely for the relief of his pains.

Four years ago he first felt pain and weakness in his left thumb. This kept on increasing, and shortly extended to the forefinger of the same hand. The loss of power then successively invaded the remaining fingers and passed up the arm, until he completely lost the use of it. Three years ago (or one year after the thumb of the left hand was first involved), he noticed pain in the right shoulder, and afterwards in the same forearm; and this was followed by general wasting and loss of power in the arm. He is certain that in this limb the weakness began in the shoulder and not in the thumb, and that the wasting appeared to him to be general throughout the arm. Sixteen months ago in his right leg, and eight months ago in his left leg, he felt what he describes as rheumatic pains, especially about the knees.

His family history is good, father and mother having both been long-lived. No nervous disorder could be traced in his antecedents.

Present Condition.—The muscles of both hands and arms are atrophied to an excessive degree, being most marked and abso-

lute in those of the palms. There is entire absence of the muscles of the thenar regions,thus causing the thumbs to assume the characteristic appearance of the disease. They fall loosely outwards, and he has no power of adapting them to the corresponding forefinger—and the hollowed out concavity of the first metacarpal bone is perfectly traceable throughout. The palms are quite scooped out, and present distinctly the edges of the metacarpal bones and the prominent flexor tendons passing over them—from atrophy of the interossei and lumbricales, nothing being felt between the bones of the hand but the integument back and front. When the arm is lifted up the hand drops from the wrist, the fingers are flexed, and the thumb falls outwards. There is not the least power of flexion or extension in the fingers. The muscles of the forearms, upper arms and shoulders are also excessively wasted. The pectorals and elevators of the scapula are also very much reduced in size and flabby. The spinal muscles are not materially affected. The flexor and extensor muscles of the right thigh are much wasted, and the limb in consequence so much weakened that he is extremely apt to trip and fall in walking. The muscular fibrillar tremor is very frequently seen in many of the affected parts, and is readily induced by a slight pinch or blow. It is sometimes perceptible by himself but gives rise to no pain, but occasionally slight uneasiness.

By the ophthalmoscope no changes are perceptible in the optic discs and retinæ. His general health remains good. Appetite very fair and sleeps well.

He was put upon 1-50 gr. of phosphorus in pill (Warner & Co's.) three times a day.

He remained in Hospital several weeks but no improvement was apparent.

Case of Fibroid contraction of the Right Lung with displacement of the Heart; Tricuspid Regurgitation, Albuminuria.—Death and Autopsy.—Under the care of Dr. Ross. Reported by Mr. C. L. Cotton.

C. H., æt 37, was admitted into the Montreal General Hospital complaining of cough and swelling of the limbs. She is a

married woman and has had one child, now thirteen years old. Family history good.—No consumption. She dates her present illness from the time of her coming to this country, which was four years ago. She caught a severe cold on board ship, and has never been well since. Has been quite unable to work for the last two years.

There is considerable emaciation and decided pallor combined with a tendency to bluishness of the extremities, the finger ends markedly clubbed. Thighs and legs œdematous, and pit on pressure. Abdomen moderately distended with ascitic fluid. The œdema first showed itself last spring but disappeared, coming on again about a month ago, since when it has been constantly present. Had night sweats some months ago, since which time she has had repeated attacks of blood-spitting, this always, she says, being most profuse during the times corresponding with her menstrual periods. There has now been no hæmoptysis for a month. Has a constant cough, accompanied by much heavy expectoration.

Inspection of the chest shows considerable falling in of the right side, especially beneath the clavicle, and retraction of its entire bulk. Percussion on that side dull throughout, with a tubular quality in the infraclavicular region. Breathing blowing and accompanied by loose moist rales. Left lung somewhat hyper-resonant on both surfaces. Bubbling rales of various sizes almost everywhere heard, especially abundant at the base. Apex-beat of the heart not visible, but distinct pulsation to be seen in the spaces from the 2nd to the 6th on the right side. Heart sounds feeble. A loud systolic murmur is heard over the sternal region and quite distinctly over the whole right anterior aspect of the chest. It is accompanied by a slight, purring thrill. The superficial veins of the neck are very large, prominent and tortuous, and in the jugulars a distinct but not very forcible systolic pulsation is visible.

The urine (31 oz.) contained a heavy deposit of amorphous lithates, and gave a small precipitate of albumen. No casts. Bowels very regular.

Ordered tr. ferri, mur., tr. digitalis aa. mx, three times a day.

October 12*th.*—Has coughed a good deal. Sputa abundant, composed of distinct purulent masses. Temperature normal; pulse 120. Ordered 6 oz., of wine.

14*th.*—This morning had a chill and has since been quite feverish. Pulse 116. No appetite. Œdema rather increased in thighs. Albumen still present.

18*th.*—Not much change but getting gradually weaker. Cheeks and lips nearly purple. Respirations 44; pulse 120. The tr. digitalis increased to m xx.

21*st.*—Passed only 6 oz. urine, containing considerable albumen.

23*rd.*—Very poorly to-day. Has a constant pain across the epigastrium. Passed only 5½ oz., of urine. Œdema much increased. Tongue much coated and always nausea. Ordered potass. bitart. ʒss, pulv. jalap co. gr. xv. at bed time, and to take potass. bitart. gr. xv. infus digitalis ʒij, three times a day.

24*th.*—Very feeble. Pulse weak, thready. and very quick Lips blue. Is much swollen. Urine 7 oz., highly albuminous.

26*th.*—Is steadily sinking; pulse very small and thready. Hardly able to expectorate at all. The sputa run together. Ordered brandy and soda water.

27*th*—Died at 10.30 p.m.

Autopsy.—By Dr. Osler—Body, that of a medium-sized woman. Emaciation moderate. Skin of upper part of body, especially about the neck, of a livid hue, and scattered over with numerous ecchymotic spots. Lineæ albicantes present in lower abdominal and antero-lateral region of the thighs. Legs and lower and back part of the trunk œdematous. Face not much emaciated. Rigor mortis has almost disappeared.

Thorax and Abdomen—About four ounces of dirty yellowish fluid in the peritoneal cavity. Stomach distended with gas. Position of abdominal viscera normal. On opening the thorax the heart is seen to to be drawn over to the right side, the base and great vessels lying beyond the costal cartilages of this side and the organ lay transversely. On removal of the heart, 20 oz. of fluid blood and dark grumous clots escaped into the pericardium.

Heart.—Cavities of the right side much dilated and full of blood, walls of right ventricle appeared somewhat thickened. Tricuspid orifice dilated, admitting four fingers nearly to the second joint. Segments of the valves a little thickened at the edges. Musculi papillares look elongated and the apices are fibroid. Pulmonary semi-lunar valves healthy. Left ventricle, cavity and walls look of normal size. Mitral valves a little thickened. Aortic semi-lunar competent, but slightly opaque and atheromatous at their bases.

Lungs.—Right, universally adherent, and removed with difficulty ; organ firm, solid, and to the touch gives no indication of crepitation. On section no trace of the lobes remains. A large cavity occupies almost the entire apex, situated chiefly in the antero-lateral region, the posterior wall being composed of irregular fibroid masses, through which two or three large bronchi open directly into the cavity. The upper and antero-lateral walls are made up of a layer ef fibrous tissue $\frac{1}{4}$–$\frac{1}{2}$″ in thickness, the outer part white : the inner portion darkly pigmentcd. Two irregular prolongations from this cavity extend downwards and forwards towards the anterior margin of the lung, and another narrow one extends for two inches along the posterior part of the organ, immediately beneath the pleura, which is here thin. The lining membrane of these cavities is dark red in colour, and traversed by numerous bands, the remnants of bronchi and blood-vessels. The base of the organ is firmly united to the diaphragm, and the portion which is received into the angle between this membrane and the ribs is, for the extent of 1 $\frac{1}{2}$″ transformed into a mass of white fibroid tissue, devoid of any trace of lung substance. Between the upper margin of this fibroid area and the cavity of the apex—a distance of 3″—the lung presents a marbled appearance, is dense, firm, and with the exception of one small spot close to the root, airless, a few small dilated bronchi are evident below, while immediately beneath the pleura are one or two small cavities filled with a bloody and purulent matter. The anterior border of the organ is in the same condition, and on section numerous small cavities (some of which are dilated bronchi) with bloody contents are seen. The organ is

not excessively pigmented. The main bronchus and its branches of the 2nd and 3rd degree are moderately dilated. Bronchial glands firm, not enlarged, moderately pigmented.

Left lung adherent at the apex only. On section a large irregular cavity with thick dense walls occupied the upper and anterior part of the apex, the lining membrane of which is hæmorrhagic, and the contents, pus with blood. The remainder of the organ is extensively emphysematous, especially at the anterior border, but presented no other degenerative signs.

Spleen.—Of average size, tolerably firm, capsule opaque. Organ on section of a dark-purplish red colour. Malpighian corpuscles indistinct, vessels full.

Kidneys.—Capsules thick and detached with difficulty, leaving the surface slightly granular. Substance firm, cortex a little diminished and pale. Vessels at the bases of the pyramids full. One or two cysts noticed.

Stomach.—Veins full, and dependent parts of the organ dark in colour. Mucous membrane of the organ dark and easily torn.

Intestines.—Veins full, but nothing abnormal noticed.

Uterus, Ovaries and Bladder look natural.

Brain—Long clot in superior sinus of dura mater. Veins of pia mater full in posterior parts. Nothing abnormal noticed about the supervisceral parts. Organ reserved for dissection.

Reviews and Notices of Books.

A practical Treatise on the Diseases, Injuries, and Malformations of the Urinary Bladder, the Prostate Gland and the Urethra.—By SAMUEL D. GROSS, M.D., LLD.., D.C.L., Oxon., Professor of Surgery in the Jefferson Medical College of Philadelphia. Third edition revised and edited by Samuel W. Gross, A.M., M.D., Surgeon to the Philadelphia Hospital; illustrated by 170 engravings. 8vo. pp. 574. Philadelphia: Henry C. Lea, 1876.

This may be looked upon as an entirely new work, although it is published by the author as a third edition. Upwards of twenty

years have elapsed since the second edition of Gross on the Urinary Organs, issued from the press, so that the book has long been out of print. This did not proceed from the indifferent character of the work itself, nor from any lack of interest on the part of the author in this class of diseases, but apparently from his having gone into another groove, possibly in more extended duties as Professor of Surgery in the Jefferson Medical College. Furthermore, the erudite author of this treatise has given to the profession his system of surgery, pathological, diagnostic, thera peutic and operative, which is reaching its fifth edition, and has also been extended to two large volumes. This might be considered sufficient for any one man to accomplish if 'tis well done, an opinion which on a former occasion we, with others, have fully expressed. As will be observed, this edition has been revised and edited by Dr. S. W. Gross, the son of the author, and to his pen we are indebted for chapters on tumours of the urinary bladder and prostate gland.

The arrangement of the subjects under discussion in this edition is the same as that met with in the original work, with the exception that the introduction in the former editions, which dealt with the anatomy of the perineum, urinary bladder, prostate gland, and urethra, has in this been omitted.

The work is divided into three parts. In Part I is discussed "Diseases and Injuries of the Bladder." After treating of inflammation, both acute and chronic, and ts results we have a chapter on functional derangements and incontinence of urine. This occupies the first four chapters. We then have chapters on "retention of urine," tumours and ubercle, varix and hæmorrhage from the bladder.

Calculous affections in the male and female, with their treatment are then discussed in the next three chapters. Wounds of the bladder, malpositions, malformations and the results of arrest of development are next in order, although these subjects in the former editions were described in the first and second chapers of Part I.

There is also omitted in this edition chapters on worms in the bladder, fœtal remains, hair and other foreign substances which

have been in some very exceptional cases passed with the urine. In the discussion on calculous disorders and the relative frequency of stone in different countries, the author notices its infrequency in Canada and the New England States. This is a matter of such notoriety that many surgeons of eminence in this part of the country have never seen a case of stone in the bladder.

Stone, in this city, has been much more frequent of late years than formerly, from what cause we are unable to determine. We were always impressed with the belief that stone in the French Canadian colonist was an exceedingly rare event, almost as much so as in the negro of the South. Up to the year 1867 we had seen but two cases of calculous affections, and they were both in children of English parentage, and both cases of urethral impacted calculi. This was during the first twenty years of our professional career. In examining the records of the Montreal General Hospital for the past ten years, ending 30th April, 1876, we find that there have been admitted into the house 55 cases of stone in the bladder, of these, 34 underwent the operation of lithotomy, with a result of three deaths, giving a percentage of 8.82. The remaining 21 cases were treated by the crushing operation, and all recovered. The large majority of these cases was in children. The author remarks "Certain facts seem to warrant the inference that this affection is hereditary," on this point we have met with four cases which would almost lead to that conclusion, and they are of sufficient interest to mention here. In 1867 we cut a child of $2\frac{1}{2}$ years of age, and removed a small calculus from the bladder. The father of the child was a soldier, and had been operated on by the crushing operation some years before in England. The second case was that of a merchant from the neighboring States, on whom we performed the operation of lithotomy. As he expressed it, he said it was a disease in the family. His father, two uncles and a brother had suffered from gravel, all had passed small calculi from time to time. They all lived in the States, but they were not all residing in the same State. In the third instance, not perhaps so remarkable as the foregoing, all were living under the same hygienic conditions, occurred in a French Canadian family

in this city. The grandfather had been operated upon when a young man, by the late Dr. Robert Nelson, formerly of Montreal. The father of the child suffered from gravel, and passed from time to time masses of uric acid calculi, some as large as a pea, some of which we have in our collection. The child we cut and removed a small solitary stone from the bladder, shaped somewhat like a French bean. In the fourth instance of apparent hereditary predisposition, the family lived in Vermont. The father was a strong large-framed man, tolerably robust in appearance who had suffered from symptoms of stone for several years. Two, if not three, moderate sized calculi were found in his bladder. In this case we were informed that several members of the family had suffered from stone, and quite recently, we received a small pill-box from the son of the above patient which contained several small calculi, and which he declared he had passed with his urine. One, indeed, is of considerable size, and must have given considerable pain in passing through the urethra.

Part II is devoted to diseases and injuries of the prostate gland, we have a chapter on inflammation of the prostate and its results, one on prostatorrhœa, an affection first described by the author, and which is often confounded with gleet, seminal losses and cystorrhœa. It is due to a condition of chronic inflammation of the prostate gland, the discharge itself being thin and glairy. We then have chapters on hypertrophy, atrophy, tumours, prostatic calculi, hæmorrhage of the prostate, wounds and malformations of the prostate gland.

In part III is described diseases and injuries of the urethra. In the chapter on stricture of the urethra the author remarks "upon the testimony of personal experience, that there is a class of strictures, the result of ordinary cause, which while they admit of the passage of urine, slowly and imperfectly it may be, do not permit the introduction of any instrument however small, into the bladder." This we believe is correct, rare, perhaps, though it is entirely denied by some surgeons. In the treatment of stricture, the author advises preliminary means to be adopted with a view of allaying excessive sensations, such as the methodical introduction of a conical steel bougie, or stimulating injections,

and he believes great benefit is to be derived in cases where the lining membrane is studded with granulations by the topical application of nitrate of silver, the application to be made by Lallemand's *porte-caustique*, or a modification of that instrument suggested by himself,

He is convinced that the least irritating instrument for dilating a stricture is a nickel-plated steel bougie with a short curve, a heavy handle, and terminating in a somewhat conical point, the introduction to be practised every second or third day. The instrument should be passed into the bladder and at once removed, after the bladder becomes more tolerant of its pressure it should be retained five minutes. In speaking of forcible dilatation the author remarks that it "may be said to be absolutely free from danger unless there is advanced renal disease." Of internal urethrotomy in suitable cases he speaks most favorably, and is "convinced of its superiority as to enduring results, over all other plans." There is figured a new urethrotome by the editor, which is favorably noticed. The remaining chapters in this section are on false passages, infiltration of urine, urinary abscess and urethral fistula, these all come under the consideration of the results of stricture of the urethra. The author then proceeds to discuss prolapse of mucous membrane of the urethra, tumours, foreign bodies, laceration and malformations of the urethra, and closes with a chapter on lesions of the veru montanum. The work as a whole is a valuable contribution to the surgery of this region. It will be found of great use from its practical teaching, expressing as it does the observations and convictions of a surgeon of large experience.

The Electric Bath; its Medical Uses, Effects and Appliances By GEORGE M. SCHWEIG, M.D., Member of the New York County Medical Society, and of the Medical Journal Association of the City of New York; one of the Physicians of the New York Lying-in Asylum, &c. 8vo. pp. 131. New York: G. P. Putnam & Sons, 1877.

In any branch of therapeutics whose development is so recent as that of electro-therapeutics, a book of original contribution

to our knowledge is welcome. The little book before us by Dr. Schweig, introduces to us a new method of using electricity, which originates with him, and merits some consideration. The method he calls Electro-balneology. It consists in the application of electricity through the medium of water, pure or medicated, in a bath.

The apparatus which the author uses consists of a bath made of some non-conducting material, if wood, thoroughly painted in the inside for an obvious reason, a plate of carbon fitted into the head and foot, each connected by insulated copper wire, with binding screw, to which also the poles of the battery are attached. He also has a surface board, a movable board into which is fitted a carbon plate, to which can be connected either pole of the battery, for the purpose of localizing the action of the current. The continuous galvanic and the faradic or induced currents may be applied according to indications which he points out. Either a descending or ascending current may be applied according as the positive or negative pole is connected with the carbon plate at the head of the bath. As to the temperature of the water, the comfort of the patient may be consulted, ranging, from 85° to 105° Fahrenheit.

The advantages which the author claims for Electro-balneology, and by which he establishes for it an "individuality as an Electro-method," are that to the benefits of the electricity are superadded those of the warm bath, and that "the bath is the only method by means of which general electrization can be realized." It accomplises all that is effected by the general faradization, more perfectly than the latter does. By means of the bath, "the current at one and the same time impinges directly on every peripheral nerve end, (excepting those of the head and face), and traverses every part of the body, obtaining both as to reflex and direct effects, as a whole, that which the method known as general faradization seeks to obtain by the cumulation of fractional portions." After a description of the apparatus and the mode of administration, the author devotes a chapter to the physiological effects of the special electrical method, another to its therapeutical effects and uses, and fills the rest

of the book with special applications accompanied by clinical records.

A priori, we should think that Electro-balneology would be most useful in those conditions of the system which require a general nervous tonic, and those local affections which depend on such conditions, and from the record of Dr. Schweig's experience we conclude that it is specially applicable in such cases. The results appear to have been most satisfactory in what he calls neurasthenia, or general nervous exhaustion, impotency, habitual constipation, &c. The application of the galvanic bath, which Dr Schweig has not been the first to make use of, is for the extraction of metallic poisons from the system, as lead, mercury, &c. There is a case of extreme plumbism reported in *The Lancet*, vol. ii. 1876, page 531, which was treated most successfully by this method in St. Mary's Hospital, London. Actual traces of lead were found in the water of the bath after its use. Dr Schweig recommends the addition of iodide of potassium to the water for lead poisoning. The substances with which the baths are medicated are various. With a view to their absorption, iron, iodine, and extract of malt have been used; others for some special action on the skin, as counter-irritation, and others for the elimination from the system of metallic substances.

Whatever limits future trial may assign to the therapeutical uses of electro-balneology, its originality renders it interesting, and the favorable results of Dr. Schweig's short experience, extending over only two years, compel us to recognize it as a valuable method of electro-therapeutics.

A Manual of Percussion and Auscultation; or the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism.—By AUSTIN FLINT, M.D, Professor of the Principles and Practice of Medicine, and of Clinical Medicine in the Bellevue Hospital Medical College. Philadelphia: Henry C. Lea. 1876. pp. 255.

Whatever has been done by Prof. Flint has been done well. It is so with this little manual of Percussion and Auscultation. Of

course there are already to be had a number of works with similar title, and the subject itself does not permit of a great deal of originality. At the same time much of the usefulness of a manual of this kind will depend upon the manner in which the subject-matter is arranged and selected, and the extent to which the fundamental principles of the art are made to prominently appear throughout so as to impress themselves firmly in the mind of the reader. In the matter of sounds (both percussional and auscultatory) a vast amount of refinement and hair-splitting has been indulged in by various authors, which has served no purpose but to exhibit their own expertness in their detection, and to lead to the greatest possible confusion of ideas on the part of those who attempt to follow them. This error has been most carefully avoided by Dr. Flint. He tries in every case to simplify and reduce to a common basis, rather than to amplify and subdivide. For this the beginning student especially who may use his manual, cannot be too thankful, for by its very simplicity it is easily understood and remembered. Another point in favor of the plan of this work, is that, in many cases the mechanism of a certain sound will be found to be open to explanation in perhaps several different ways. Here it serves but little good to argue upon these points, and hence they are frequently entirely discarded. Of course, when the mechanism of the sound can be clearly explained this is done, the knowledge of it being then valuable owing to the constancy of the connection existing between the sound and its cause.

Is is an excellent manual for teaching this important branch of the medical art, and we commend it to the notice of students for daily use in connection with their Hospital practice, and to practitioners for frequent reference.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Trephining in Osteo-myelitis.—M. Ollier, in a recent communication to the Academy of Sciences of Paris, holds that trephining is applicable to all forms of osteo-myelitis which have, as a predominant character, intense and persistent pain. The operation is also applicable, under certain conditions, to acute osteo-myelitis with severe general symptoms. Intense and peristent pain, is not, M. Ollier states, peculiar to a single variety of osteo-myelitis. The most diverse lesions of the bone-marrow may have a neuralgic character, the pain being the result of compression of the inflamed and swollen medullary tissue by the surrounding bone. In different cases of painful osteo-myelitis the bone-marrow, when exposed by trephining, presents the most diverse appearances. In some instances there will be found a fungous mass bathed in serous fluid and enclosed in an osseous capsule. In other cases the medulla will be firm and gelatinous, and be traversed by trabeculæ of newly-formed bone; or, again, the surgeon may strike on a regular cavity with smooth walls, and filled by pus. When the osteo-myelitis is of slight extent, and the disease is circumscribed by an osseous wall, immediate and decided relief may usually be obtained by trephining. In the plastic form of osteo-myelitis, accompanied by more or less eburnation of the peripheral layers, relief is less speedy and less certain, except a considerable portion of bone be removed. When the foci of disease are disseminated, the causes of the compression of the bone-marrow will, probably in part, be left without the track of the trephine. In this diffuse form, however, the operation may arrest for a time the intolerable pain, and enable the patient to live in ease for several months, and even for years. Painful osteo-myelitis is generally met with near an end of the shaft of a long limb-bone (tibia, radius, femur).

The name of *epiphysial osteitis* cannot be properly applied to painful osteo-myelitis near one end of a long bone. An epiphysis is rarely the primary seat of the affection, and when it is,

the neighbouring articulation is also involved. The seat of election of painful osteo-myelitis is the spongy part of the diaphysis, near the cartilage of conjunction.

Notwithstanding its brilliant results, trephining, M. Ollier states, should not be performed till after the non-operative resources of treatment have been exhausted. In some cases the pain may be relieved by simple separation of periosteum, and without perforation of bone. Trephining should be reserved for those cases in which the inflammatory character of the lesion cannot be doubted. The operation may, when other plans of treatment have failed, be applied in any form of inflammation, if the severity of the symptoms demand intervention. In the acute form the grave and often fatal symptoms of suppurative osteo-myelitis may be prevented, and in the subacute or chronic forms, the predominant phenomenon of which is intense and obstinate pain, relief may be afforded by relaxing the pressure of the peripheral osseous tissue on the swollen marrow. The trephine, in its course to the medullary spaces, will traverse in some cases thickened and more or less eburnated bone, and in other cases bone that has become soft and atrophied. The condition of thickening is met with generally in old cases in which prolonged plastic transformations have taken place around the primary seat of disease; the condition of softening in cases of recent subacute inflammation. In the former class of cases spontaneous cure is almost quite impossible by reason of the resistance of the osseous walls. In the latter class pus will gradually find a way to the surface of the bone through gradual "medullisation" of the wall of the shaft. This process of natural cure, however, may be carried over a long period, and may keep up for many months' suffering that might at any time have have been instantaneously relieved by surgical intervention.

In eight out of nineteen cases of painful osteo-myelitis treated by trephining M. Ollier found pus. In ten cases were found the different morbid conditions of the marrow that have been mentioned. In three out of these ten cases there was a distinct and regular cavity. In the remaining seven cases the disease was not well circumscribed. In the last case — one of acute

osteo-myelitis of the femur—M. Ollier gave exit to a large collection of fluid blood. The result of the operation, in most of these cases, was very simple. The type and character of the pain were at once changed, and the nocturnal attacks of deep-seated and lancinating anguish were replaced by a feeling of uneasiness in the wound, which gradually ceased. This change took place most rapidly in those cases in which a circumscribed cavity had been found in the bone.

Of the nineteen cases of trephining alluded to by M. Ollier two were fatal through pyæmia. In one of these cases osteo-myelitis persisted after the operation; in the other case the patient died on the sixty-third day from the date of operation after convalescence, as it was thought, had been well established, and the wound had been almost completely closed.—*Gazette Médicale de Paris*, No. 36, 1876.—*Brit. & For. Medico-Chirurgical Review*, Jan. 1877.

Hypodermic Alimentation.—(By Dr. G. F. Duffey).—In a case of chronic gastric ulcer, accompanied by high temperature, almost imperceptible pulse, and the delirium of inanition, and in which even milk was constantly vomited and rectal injections were no longer retained, a trial was given to hypodermic injection of a teaspoonful of milk, alternating with beef extract, every two hours. These injections were continued for four days, and at the end of this time there was a marked abatement of the unfavourable symptoms. A little milk was given by the mouth, but as it again caused pain, cod-liver oil was given hypodermically, every two hours, for three days, after which the patient had sufficiently recovered to take food in the usual way. The patient then received sixty-eight hypodermic injections in one day in different parts of the body, receiving in one day as much as four ounces of cod-liver oil. Two small abscesses formed, both from the milk. The oil caused no pain, but the precaution was taken to raise it almost to the temperature of the body. In another case olive oil was used, and the patient, a lunatic, was supported by hypodermic injections for twenty days without any

other aliment whatever; he made a good recovery (Richmond and Louisville Med, Jour.) Hypodermic injections of liquefied fats, saccharine solutions, and yolk of egg have also been used. Stricker and Oser have even tried injections of peptone. Krueg has found this method eminently successful in the treatment of an insane patient who refused to eat, and in whose case the œsophageal sound was fraught with danger. Nutrient hypodermic injections were decided upon. The syringe, which could contain 15 centigrammes of fluid, was connected by means of India-rubber tubing, to an ordinary Pravaz's syringe. The passage of the fluid could be readily seen in the glass-receiver of the syringe ; the India-rubber tube diminished the shock and rendered any movement on the part of the lunatic less dangerous. At first one syringeful, afterwards two (30 centigrmmes) were injected each day. The duration of the operation varied from half an hour to an hour. The longer the time devoted to it, the less was the pain caused. Once only was it followed by an abscess, the contents of an egg having been injected. These hypodermic injections were had recourse to from the 7th to the 25th February, with the exception of the 13th, 16th, 18th and 23rd, during which days he consented to eat, and also were used from the 27th to the 30th of March. The unpleasant odour caused by prolonged fasting disappeared after the first injection (Rev. des Sci. Med., 15 Jan.) The subcutaneous injection of sheep's blood in the insane was the subject of a paper recently read before the Société de Médicin Pratique, by Dr. Voisin (London Med. Record, April 15.) This method of treatment is not directed against the mental state, but it is intended to keep up nutrition in sufferers from melancholia considered as incurable. In one case fifty grammes of blood (1½ oz.) were injected into the subcutaneous cellular tissue of the arm every eighth day.

The Transfusion of Milk.—In connection with the above-mentioned subject of hypodermic alimentation, may be noted a case in which a patient, who was apparently moribund four days after the operation of double ovariotomy, was revived by the transfusion of eight and a half ounces of fresh cow's milk into

the median basilic vein. The woman made a good recovery. (American Jour. of the Medical Sciences, January, 1876.) The operator, Professor T. Gaillard Thomas, says he is averse to the transfusion of blood, and was induced to employ milk, from the success which attended its use in the hands of Dr. Hodder, when injected into the veins of apparently moribund cholera patients in the Canadian epidemic of 1850. Dr. T. W. Howe, of New York, has also injected six ounces of warm goat's milk into the cephalic vein of a patient suffering from tubercular disease, and who appeared to be dying from starvation, in consequence of inability to retain nutritious material by either stomach or rectum. This patient felt better after the operation, but only survived it four days. There were no clots in the veins of the arm or in the lung. Donné has shown that milk may be injected into the veins of dogs and rabbits without any injury to them.—*Dublin Journal of Medical Science*, June 1876. p. 584.—*Braithwaite's Retrospect*, July to Dec. 1876.

Stricture of the Œsophagus; Gastrotomy; Recovery.—(Under the care of M. Verneuil, of the Hôpital de la Pitié, Paris.)—The operation of gastrotomy was performed for the first time by Sédillot in 1849. Since then this operation has been practised a large number of times in England, America and Germany, but before the present case it had never been followed by recovery. It is true, that in the great number of cases which have hitherto been recorded, the operation was undertaken where the stricture was due to some morbid growth of the œsophagus. The account of the case is briefly as follows:

R. M——. seventeen years of age, of somewhat slender build and childish appearance, inadvertently swallowed on the 4th February, 1876, a solution of potash, which caused a very severe burning sensation in the throat. Strong fever came on, and deglutition was excessively painful, and almost impossible during a few days. After two weeks the œsophagitis subsided, but the youth continued to experience great difficulty in swallowing solid

food. On the 31st of March he was admitte l into the Pitié, into the service of M. Dumontpallier. Under the care of this gentleman dilatation of the œsophagus was attempted during two months by means of various instruments, and finally on the 24th May, seeing that the general condition of the patient was gradually growing worse, he was passed into the wards of M. Verneuil. At this time swallowing was almost impossible, and he threw up what he took after a short interval. He had lost a great amount of flesh, and was almost exhausted. The skin was cold and cyanosed towards the extremities, and the pulse was very weak. Hunger and thirst were persistent and very trying. Upon exploration the stricture was found to lie seven centimetres down, but it was found impossible to make way into the stomach. Nutrient enemata were given in order to gain time, but finding that the general condition was getting less and less satisfactory, M. Verneuil decided upon operative interference. A last attempt to pass the stricture, under chloroform was made, and was crowned with success. This caused temporary relief, and allowed the patient to take some nourishment. On the 10th of July, however, the stricture became, seemingly without any reason, suddenly and completely impassable. The axillary temperature at this moment was 35° C. (95° F.)

The patient having implored M. Verneuil to do something in order to relieve him, it was decided to make an opening in the stomach on the 25th July. Having taken all necessary antiseptic measures, an incision five centimetres in length, at the left limit of the epigastrium, parallel to and two centimetres from the cartilage of the eighth rib, was made. The several tissues were successively incised, and lastly, the peri oneum having been opened, the stomach was laid bare. This organ was then drawn to the orifice of the wound by means of a pair of forceps, and firmly sutured to its edges, without an opening having been made. This method is superior to that in which the stomach is incised before being fixed to the edges of the wound, as in the former there is no danger of any blood falling into the peritoneal cavity. A buttonhole opening was then made in the wall of the stomach. A soft red caoutchouc sound was next placed in the

stomach in order to keep the opening patent and to allow the free introduction of food. A plug was placed in the extremity of the sound, in order to prevent any air penetrating into the cavity of the stomach. Antiseptic dressings were then applied to the wound. Evening temperatare, 35.6° C. Slight pain. Pulse normal. At midnight 140 grammes* of milk were injected, but they produced vomiting,and a portion of it was thrown out by the tube, in a semi-coagulated state.

July 27th.—Complains of some difficulty of breathing. Nothing wrong on auscultation. Complains always of pain. Pulse feeble; temperature low. Injection of bouillon and Bordeaux wine every four hours. Slight jaundice. Wound healthy.

28th.—Jaundice more pronounced to-day. No fever. Stomach painless. Bears the injections well.

29th.—Pulse and temp. higher; breathing freer; no cough.

30th.—General condition the same. Slight blush round the wound; no erysipelas.

August 1st.—From this date the patient continued to recover rapidly. He gained flesh, his cheeks filled out, and he became cheerful. The injections do not inconvenience him in the least.

15th wound completely healed.

The following table gives an idea of the rapid manner in which the economy repaired its forces:

July	26th.	Patient weighed	33	kilogrammes. †
Aug.	18th	"	34	"
	21st	"	34.4	"
	25th	"	35.5	"
	31st	"	36	"
Sept.	8th	"	37.5	"
	14th	"	39	"
Oct.	4th	"	40	"
	20th	"	42	"

The nutrient injections into the stomach only determine a sensation of cold or heat. The absence of saliva among the ingested articles does not seem to interfere with the functions of digestion, as every kind of food seems to be assimilated with an equal

* One gramme is equal to 15.4 grains.
† One kilogramme is equal to 2 lb 3 oz. 120 grains (nearly).

degree of facility. Eminent physiologists are now utilizing this subject for the purpose of making researches on digestion. At a later period we hope to publish the result of their researches, and the ultimate issue of the operation, which up to the present moment, may be considered a complete success.—*The Lancet.*

Paracentesis Thoracis.—Œri reviews 75 cases of Thoracentesis in serous and purulent exudations, which occurred at the medical clinic of Basel, from 1874-76.

The puncture was made usually in the hinder part of the thorax, in the scapular line, or between this and the vertebral column, and in the lowest intercostal space possible, commonly the twelfth. The resistance frequently met with in this operation may be caused—independently of the formation of coagula and prolapse of the lung—by the thickened pleura or adhesions preventing the expansion of the lung, which in forcible aspiration may even be torn, and cause a slight hæmorrhage. When this is the case the patient experiences a sensation as if something had cracked in his chest. An instance of this with recovery is given. If the lung be not capable of expansion, continued aspiration draws the mediastinum to the affected side, and the diaphragm up. By very forcible aspiration the chest wall may sink in, rupture of the pleura not occurring unless there are extensive changes in the lung substance, cavities near the periphery, &c. Hence in the aspiration of old exudations it is advisable if phthisical changes are discovered, if the exudation becomes mixed with blood, or if much pain is complained of to discontinue the operation when the resistance becomes increased. In large and old effusions the author advises that not more than 1500 cc. of fluid should be drawn off at once.

After the subsidence of the fever, *i e*, at or about the end of the third week, is thought the most favorable time for the operation ; still, even if the fever continue after this, it is not contraindicated.

In 75 operations, 52 were performed during the continuance of the fever, in 32 of these the character and height of the fever

remained unchanged; in one case it rose, in the remainder it disappeared either completely or partially.

In two cases the exudation became purulent after the operation, in one after the first, in the other after the third puncture; both were, however complicated with tubercular phthisis. Pneumothorax followed the removal of the exudation in one instance, and in the same individual accompanied each operation, disappearing every time very quickly.

The lung was repeatedly perforated in the operation without any ill effects following. Once the wound led to an hæmoptysis, by which directly after the operation three tablespoonsful of bright red blood were brought up. In this case the layer of effusion was so thin that the needle passed through into the lung.

In another case a pneumonic lung, which was falsely supposed to be an effusion, was punctured. The error arose from the fact that a croupous coagulum completely blocked the main bronchus causing thereby an entire absence of breath sounds and vocal fremitus. In a third instance a tumour was mistaken for exudation and punctured.

With regard to the evacuation of empyema by aspiration —the method employed in the Basel clinic,—the author recommends that not more than 500 cc. of pus should be removed in one sitting. The lung in these cases, on account of the thickening of the pleura, is not capable of complete expansion, and if the evacuation be made forcibly the chest wall and diaphragm are drawn to the affected side. Of six patients treated in this way five recovered, of whom three required but one puncture, the other two from four to six operations.—(Stuttgart 1876. 8vo. Rft. in Centblt. f. Med. Wissen, Dec. 23rd.)

Therapeutics of Nervous Disorders.—(Dr. Berger of Breslau.)—

(1). *Phosphorus.* — Berger has employed phosphorus in twenty-two cases of neuralgia, and was unable to secure the brilliant results the English authors promise. Certainly five of the most recent cases were cured by this drug, but with the rest this remedy had no effect, although most of them were subse-

quently cured or improved by the administration of other remedies. In six remaining uncured cases the subsequent employment of phosphorus had no effect whatever So it appears that the famed anti-neuralgic action of this remedy is very problemmatical, and Berger says he cannot recommend its employment. Berger also used phosphorus with little effect in that peculiar disorder for which there is no anatomical explanation, bnt which he calls *neurasthenia cerebralis*, and by which he understands that there exists a condition of pathological lessening of the psychical functions, and in which there is total unfitness for any form of intellectual activity, without any palpable lesion taking place in the brain or other organs. These patients are generally young men belonging to the educated classes,and more especially those predisposed to neurotic affections. They may have suffered for years under what was supposed to be hypochondria. This affection generally comes on without cause. The treatment Berger found most useful was complete rest of brain and change of air.

(2.) *Zincum Phosphoratum.*—Berger tred this in 15 cases of different nervous disorders (neuralgia, chorea, singultus hystericus, &c.,) in doses of 5–8 mgrmm, in form of pill three times a day. In one case only of hemicrania was it of any use, in all the other cases it signally failed. If continued long he found it caused disorder of the stomach.

(3.) *Camphora Monobromata.*—This was tried in 36 cases of different nervous disorders, the results were as follows :

(*a*). As a hypnotic in doses of 1.0–to 1. 5 grmm. this remedy is powerless.

(*b*). Of five cases of chorea, two improved under it soon after its employment. The other three it did not benefit in the least.

(*c*). Little satisfaction was got by employing it in neuralgia, (12 cases), or hysteria.

(*d*). Good results followed its employment in nervous heart palpitation, and in irritative conditions of the genital organs.

(*e*). In five cases of delirium tremens treated by it, no effect was produced in quieting the patient until chloral hydrate was added, but it produced decrease of temperature. The monobromate was given in gradually increasing doses of 0. 5 grmm. to 1.0

grmm. every half hour. In one case of delirium tremens, in which it alone was used to the quantity of 16 grmm., the delirium lasted six days. This remedy must be more used in this disorder before any conclusions are come to.

( ). Its efficacy in epilepsy is very questionable.

The ordinary dose of this remedy is 1—0.6 grmm., three or four times a day, and it may be given in gelatin capsules. It is seldom given in pill. To know how far this remedy can be pushed,notice the temperature ; if it descends below normal, then stop the further employment of the remedy. It sometimes gives rise to stomach trouble, and Berger says its employment has not fulfilled the promises of the French physicians, except in those disorders under class (*d*).

(4). Bourneville has lately conducted a series of observations in Charcot's clinique, in which he found that the application of ice had a good effect in hysterical and true epilepsy ; ice was applied over the region of the ovaries, and by this treatment many of these cases were cured or much benefitted. The application of ice over the region of the heart he found useful in hysterical palpitation. Ice had no effect in true epilepsy applied over the spine, but much diminished 'Petit Mal.' Ice was found useful in many cerebro-spinal affections, applied over the spine, but was most useful in cases of hysterical epilepsy, applied over the region of the ovaries.—*Schmidt's Jahrbücher*, Bd. 172, No. 8, 1876.

On a case of Intracranial Sarcoma.—Clinical lecture by J. W. Hulke, F.R.C.S., Surgeon to Middlesex Hospital :—

Gentlemen,—There died in Forbes ward, on October 28, a patient who for nearly nine months had been under observation, first at the Royal London Ophthalmic Hospital, and latterly here. I have often called your attention to him at my visits to the wards. The tumour, removed by Dr. Coupland from his body after death, is before you.and I propose to day to review hi scase.

On February 19 last, when he first came under my notice, I wrote this memorandum :—" W. J., aged thirty-nine, a worn-

looking, pale boot clicker, complains of confusion of sight, hindering him from working. The confusion is an incomplete diplopia; the double images partially cover one another, except at the outskirts of the visual field. Marked palsy of the musculus rectus externus, and slighter palsy of the musculi recti superior and inferior. Slight proptosis. Myosis. Blunted tactile sensitiveness of the left side of face, corresponding to the distribution of all three divisions of the fifth nerve (most marked in the parts supplied by the first and second divisions), with formication and a sensation of numbness. Loss of tactile sensibility and also of taste in left side of tongue from tip almost to root. Wasting of left temporal and masseter muscles, which are contracted, and act less forcibly than the right muscles, and, as he expresses it, with a feeling of stiffness.

"A sore on penis seven years ago, with knots in both groins which did not suppurate; and some time later (within one year) ulcerated throat, and rash on trunk and arms. June, 1875, toothache, for which four teeth were pulled out without relief. At Christmas confused sight."

The diplopia, the patient's chief distress, plainly arose from derangement of the concerted movements of the two eyes, for, as you know, single vision with two eyes requires that they shall both be so moved together and directed towards the object that the image of this shall fall upon identical or corresponding parts of the two retinæ. This derangement of their consensual movements obviously proceeded from palsy of the musculi recti, which, in turn, meant impairment of the third and sixth nerves. The association of myosis (contracted pupil) with palsy of the upper and lower rectus muscles, supplied by the third nerve, seemed at first puzzling, for, as you will remember, this same nerve supplies the sphincter pupillæ, the dilator deriving its supply from the sympatheticus. You would therefore expect that dilatation (not contraction) of the pupil would accompany palsy of those external ocular muscles to which the third nerve is distributed; and this is the rule. The apparent anomaly here had its explanation in the implication of the fifth nerve, for section of this nerve at the

Gasserian ganglion produces contraction of the pupil which is even greater than that which follows section of the sympatheticus alone. The myosis, together with the concurrent implication of the whole of the fifth, and also of the third and sixth nerves, fixed the situation of the disease in the neighborhood of the cavernous sinus. As to its nature, his syphilitic antecedents made it not unlikely that it was a gumma of the dura mater or bone pressing on the nerves. He was therefore ordered iodide of potassium three times a day, in doses of eight grains, which were later increased to fifteen grains. In spite of this, the proptosis and the paralysis increased, and the hollowness of the temple was replaced by an unnatural fullness. The malar region, too, became fuller. At the end of April his tongue, when protruded, deviated very positively to the left, indicating that the hypoglossal nerve had become involved in the disorder. He then began to suffer extremely from excessive pain in the temple, and his strength became so reduced that he could no longer struggle on with work, and was glad at the middle of May to become an in-patient. By this time the fulness of the left temple was very conspicuous, and the protrusion of the eyeball considerable. It was now evident that this latter was due to the invasion of the back of the orbit by a tumour, and that it was not simply a consequence of the want of tonicity in the palsied muscles. Taste was now lost in the left half of the root of the tongue, indicating implication of the glosso-pharyngeal nerve. The hearing of the left ear was not so acute as that of the right, but as no previous comparison had ever been made, the precise value of this as a sign of extension of the disease to the portio mollis of the seventh pair could not be fixed. The left facial muscles were not all palsied, but rather in a state of slight tonic spasm. The course of the malady had plainly shown that we had not to deal with a simple syphilitic gumma, and made it probable that it was a periosteal sarcoma beginning inside the skull and extending into the orbit, and through the outer wall of this or through the sphenc-maxillary fissure into the zygomatic and temporal fossæ. The sight of the eye had become much impaired, with congestive swelling of

optic nerve disc; and, at the middle of June, ophthalmia with dullness of the cornea supervened. Thinking the latter might be due to the exposure of the insensible eyeball, and the intrusion of foreign bodies, dust, etc, of the presence of which the man had no warning, the eyelids were brought together with a strap and covered by a light compress; this gave some relief, but it could not be efficiently applied owing to the protrusion of the eyeball between the eyelids, which steadily increased, till by August it was so far advanced that a needle might have been pushed behind it, between it and the orbital margin. The lower eyelid was now everted, and a large roll of swollen conjunctiva filled the angle between it and the eyeball. The pain in the left temple had grown so severe that the patient required several times a day a hypodermic injection of morphia. On October 3, upon my return from my autumn vacation, I found all his symptoms increased, and he had, added to his other troubles, difficulty in swallowing. Whatever he took stuck, he said, in his gullet, beyond which it would not go, but returned by the nares, and occasionally got into his larynx, threatening to choke him. The vagus was involved. From this time life was supported by enemata, but the rectum at length became irritable, and no longer retained them. Finally his breathing became embarrassed, and he sank on the 28th of the month, his mind being clear to the last.

At the post-mortem examination this sarcomatous tumour was found. Originating apparently at the tip of the petrosal bone, it had involved and destroyed the Gasserian ganglion and the third, fourth and sixth nerves. It had entered the orbit through the sphenoidal fissure, filling the apex of this cavity, displacing the eyeball forwards, and wasting and thrusting up the roof, so as to project into the anterior fossa of the skull as a considerable hummock, which had wasted and flattened out the inferior frontal convolution. From the orbit it had spread into the zygomatic fossa, but it had not ascended, as we had thought during life, into the temporal fossa. The temporal muscle had a very curious appearance—it was swollen, of a pale buff color, and, when cut across, the section was translucent and of a jelly-

like consistence. The rough characters were strikingly like those of myxoma; yet a closer examination did not confirm this, but showed merely an extremely wasted muscle thoroughly soaked with serum, thoroughly œdematous—a condition which depended doubtless on the obstruction of the deep temporal and of veins in the zygomatic fossa. The cavernous sinus was destroyed. From the tip of the petrosal bone, where the tumour formed a considerable knob, it had extended downwards and backwards, and involved the eighth nerve and the hypoglossal as they enter the foramina by which they respectively leave the skull. Dr. Coupland tells me that the finer structure of the tumour places it amongst the sarcomata.

Here, then, there was a considerable tumour projecting into the anterior and middle fossæ of the skull, wasting the corresponding portions of the cerebral hemispheres, revealed only by the palsies of the several nerves which it successively destroyed. No hemiplegia, no fits, no disorder of mind marked its existence; not even aphasia was present, although the inferior frontal convolution, particularly its posterior part, was wasted by it. Such absence of brain-symptoms is by no means infrequent. It is a negative evidence which counts for nothing when, in considering in any given case of external tumour attached to the skull, the question of an operation, where the propriety of interfering or of abstaining depends on the integrity or penetration of its walls. We have in our museum a myxoma of the size of a small orange, which grew from the orbit into the right middle fossa of the skull, and thoroughly wasted the temporo-sphenoidal lobe, without any cerebral symptoms denoting its presence until a few hours before death, when a persistent epileptic condition supervened. This is by no means exceptional. I have seen more than one other of the same kind, and I have no doubt that many have been recorded.

Here the question of direct interference never arose, because it was evident, when I first saw him, that the disease, which in its progress had caused the proptosis, had begun behind the orbit, and therefore inside the skull.

The ophthalmia and the ulceration of the gums bear on the still vexed question of the trophic influence of the fifth nerve,

apparently proved by the well-known experiments of Majendie, and refuted by the exceedingly ingenious experiments of Snellen. I have so often seen the ophthalmia quickly disappear, and corneal ulcers heal, where the eyeball has from disease of the fifth been absolutely insensible to touch, when some small foreign body has been taken away, and the eyelids closed with a strap of isinglass-plaster covered with a compress to prevent fresh intrusions and to protect against exposure to cold, etc., that, without absolutely denying the fifth any influence over the nutrition of the tissues, I am forced to think that this influence is less than was long believed. With respect to the mouth, although the ulcerated parts could not have been reached by the teeth, they might have been scalded by too hot liquids, of the excessive heat of which his insensible gums would not have informed him. Very considerable injuries may sometimes arise in this way. Last summer I saw a boy whose hand, after a very severe compound fracture of the arm, was perfectly anæsthetic. Whilst toasting a slice of bread, he had, without knowing what was going on, roasted deeply his fingers.

The first diagnosis—syphilitic gumma—which I always looked upon as provisional, was disproved by the progress of the case. The error was justified by his history, and it was without influence on the result. Of all forms of primary tumours of the skull, sarcoma is by far the most frequent. I have seen a very considerable number originate in and about the orbit. Mostly starting from the periosteum, they invade the bones, and extend rapidly from one to another, the sutures offering no effective barrier. Their tendency to grow again after extirpation is very strong, and unless they begin in a situation which is freely accessible, and where their thorough destruction can be effected (often with the assistance of the actual cautery and escharotics after excision), the prognosis is highly unfavorable. —*Medical Times and Gazette.*

On "Cellulo-vascular" Polypi of the Urinary Meatus.—The following is an abstract of some clinical remarks made by M. Gosselin, of the *Hopital de la Charité*, on two cases of urethral polypoid growths in the female :

In each case there was at the external urinary meatus a small red granular prominence resembling an overgrown granulation, or one of the small vascular tumors that are sometimes developed on the neck or within the cavity of the uterus,—tumours that have been called vascular polypi, but incorrectly, since they differ from ordinary polypi of the womb in being less voluminous, and in not containing uterine fibres and muscular tissue. To these growths of the meatus, M. Gosselin applies the name of "polypi" in conformity with general custom, but he takes care to point out they cannot be strictly regarded as such, since they are attached to the mucous membrane of the urethra by a broad base, and do not present a well-marked narrow pedicle. A similar exception in nomenclature is generally made with regard to the so-called naso-pharyngeal fibrous polypi, which have a too extensive attachment to allow of their being classed as true polypoid growths. Nélaton, indeed, proposed for them the denomination of fibromata of the base of the cranium. The tumurs removed in M. Gosselin's two cases were found to be made up of embryonic cells without any admixture of fusiform fibres. The growths were more vascular, but in every other respect were constituted like ordinary mucous polypi. These tumors of the meatus do not involve the whole contour of the urethra, or spread to the vagina as cancerous growths do. But it very often happens that they rapidly recur after excision. This recurrence is probably due to the fact that the base of the tumour is large and extended for some distance along the urethra, and that a portion of this base may be left after operation. It is in respect only to this recurrence that these polypoid growths of the female urinary meatus are analogous to cancerous formations. The removed growth takes place only in the urethral mucous membranes; the glands do not become engorged, and there is never any cachexia. This tumour of the meatus is a vascular mucous polypus, and is essentially benign in its nature. In one of the cases referred to by M. Gosselin, the subject of which was fifty-five years of age, the tumur of the meatus was quite indolent. The patient suffered

neither in walking nor during micturition, and there was no absolute indication for the removal of the small vascular growth. In the second case the tumor, though resembling hat in the first-named case in size, nature and composition, gave rise to acute suffering. The woman had intense pain when she walked, when the tumur was touched, and both during and for some time after micturition. Of this difference between the tumurs in the two cases, M. Gosselin can give no explanation beyond the assumption that it was due to idiosyncrasy or individual variety. An analogous difference in character is presented in cases of erythema of the vulva. In some patients the eruption is absolutely indolent, in others it is associated with intolerable pruritus, and very intense pains about the vulva.—*Gazette des Hopitaux*, No. 112, 1876.—*Brit. & For. Med. Chir. Review.*

The Inoculation of Cancer. — Noiviusky records the following experience in this matter. He employed bits of medullary cancer from the nose of a dog and inoculated in 27 cases on inflamed, in 15 on normal skin. The former were without effect, of the latter two were successful. One of these cases was as follows: In a fresh wound on the back a small bit of cancer was imbedded and the wound closed by stitches. It healed by primary union. After 14 days, in the cicatrix a small tubercle the size of a pea was evident, which grew with tolerable rapidity, so that by April 1st, three months after the inoculation, it had the size of a walnut. On the 4th May the dog was killed. The tumour was soft, on section white, and on microscopical examination, in structure similar to the medullary tumour which the inoculation was made. In the subclavian region a lymphatic gland was enlarged, and had the same appearance histologically.

In the second instance the inoculation was made in a three month's pup with a bit of the cancer from the above case. In a month and a half the dog died of the distemper. In the scar, where the inoculation had been made, was a small cancerous mass the size of a pea, which presented the characteristic structure of a medullary growth.—*Centralblatt f. d. Med. Wissen.* 4th. Nov. '76.

Tincture and Oil of Decayed Maize.—*Employment of the Tincture and Oil of Decayed Maize as a cure for Impetigo, Chloasma and Pityriasis.* By Dr. G. Rossi. *Riv. Clin. de Bologna, Aprile*, 1876.

Case I.—Mrs. P. G., mother of a large family, suffered in May 1875, from severe itching of the head caused by *pityriasis capitis furfuracea.* She took a teaspoonful of the tincture of decayed maize (Indian Corn) internally every morning, and rubbed the head daily with the rancid oil of maize mixed with a little fat. The itching soon disappeared, and in twenty days the pityriasis was cured. The administration of the tincture at first caused slight nausea and eructations which, however soon disappeared.

Case II.—A child aged seven, suffered in October, 1875, from *impetigo capitis.* The head was covered with thick, yellow crusts of dried matter, in which parasites developed and increased. A teaspoonful of the tincture of decayed maize was given every morning, and the oil was daily painted on the head. At first the patient complained of nausea, general uneasiness, and a feeling of heat all over the body. These symptoms disappeared in a few days. In a month the cure was complete.

Case III.—Two sisters Rosa and Maria P., had patches of *chloasma* of different sizes on their breasts and front of the arms. There was no itching or uneasiness; under the above treatment, cure was effected in 35 days.

The mother also suffered from the same affection and was cured by the direct application of the rancid oil. Patients never object to the oil as they do to the internal administration of the tincture. The tincture is very disagreeable to the taste, and frequently produces nausea.—(Quoted in Schmidt's Jahrbücher, Bd. 172. No. 10, 1876.)

On the use of Salicine in Rheumatic Fever.—The following conclusions have been arrived at in connection with the administration of Salicin in cases of Rheumatic Fever under the care of Dr. Ringer:—

Pain.—Dr. Maclagan says that "the relief of pain is always

one of the earliest effects produced." The present cases fully bear out this conclusion ; and even when the pain was persistent, and migrated from joint to joint (as in Cases 5 and 6), it was not severe, and there was usually no subsequent swelling. Dr. Maclagan's sixth and seventh conclusions are : that "in acute cases, relief of pain and fall of temperature generally occur simultaneously," and that "in subacute cases the pain is sometimes decidedly relieved before the temperature begins to fall." The present cases do not support these two propositions. In three acute cases (Cases 1, 4, 7) the joint-pain ceased at least twenty-four hours before the temperature began to fall, and at least four days before it became normal. In three others (Cases 2, 5, 6) the temperature became normal before cessation of pain, and in two of them the pain "persisted." In cases 3 and 8 the pain subsided and temperature became normal simultaneously. Perhaps the beneficial action of the drug on the pain ceases when the temperature becomes normal.

Cardiac Complications.—The present cases support Dr. Maclagan's statements. In only three did a murmur develop while taking salicin : this was in each case a distinct apex systolic, and it disappeared before the drug was discontinued. In one case a murmur developed after the discontinuance of the drug. In the other four cases no murmur existed, though the soft, low first sounds in two of them suggested the anticipation of murmurs.

Sweating.—Profuse in three cases ; produced miliaria in one of them ; was alkaline in a third. In all the rest the skin was simply moist.

The *urine* never gave any large deposit of lithates ; was usually only moderately acid, and on one occasion was alkaline Salicin was detected in the urine in one case six hours after administration, and gave the purple reaction as late as the fourth day after the discontinuance of the drug—in this respect differing notably from quinine.—*Medical Times and Gazette.*

CANADA

Medical and Surgical Journal.

MONTREAL, FEBRUARY, 1877.

COLONIAL SURGEONS AND THE MERCHANT MARINE.

By the action of the Board of Trade of Great Britain, ship owners have been notified that from and after the 1st January, 1877, all surgeons in charge of emigrant ships, sailing from any British port, must hold a British qualification, or a diploma from some British University or College. In the case of Canada this appears to be an exceedingly hard matter, as it places the institutions of our country at a disadvantage. We do not desire to call in question this action of the Board of Trade, but think that hasty legislation will end in trouble and may lead to difficulty. We in Canada are governed by laws of local origin, and which the Board of Trade of the mother country has no power to alter. It is in every way desirable that persons in charge of emigrant ships should be duly qualified and hold legal status. But it must be borne in mind that no British graduate, as such, holds any status in Canada, he cannot practice his profession in this country on the strength of his holding any British degree, nor can he enter any Court of Law, or be recognized as a duly qualified medical practitioner in Canada, unless he complies with the law of this colony and is duly registered in the books of the Provincial Medical Board.

An emigrant ship leaves Liverpool for Quebec in charge of a British graduate duly registered in Great Britain. If it is a steamship, three or four of the last days of the

voyage is performed in Canadian waters, from the time the vessel enters the Gulf of St. Lawrence up to the time of her arrival in the port of Quebec or Montreal, as the case may be, the surgeon, if he is not registered in Canada, is acting as such surgeon to his vessel in contravention to the law of this land. He is liable to fine and imprisonment, which fine is recoverable from the ship-owner. Such is the law as it stands in respect to our country. The General Council of Medical Education and Registration of Great Britain has refused to recognise Canadian qualifications, and the Canadian Colleges of Physicians and Surgeons of the Provinces of Quebec and Ontario refuse to recognize British qualifications and to admit the holders of these qualifications to registration in this country. Here, then, is a stop put to all amicable relations in these particulars. Let it be understood that in the Province of Ontario no degree or qualification of any description is recognized, except as an evidence of the holder having passed through a regular curriculum of study. In Ontario there is but one door of entrance to the profession. Before a candidate can obtain an examination before the examiners appointed by the Medical Council of Ontario he has to give evidence of having passed a preliminary examination on subjects which are the same as those demanded by the British Act, and of having studied his profession uninterruptedly for four years from the time of passing his preliminary examination, during which period he is required to attend three sessions of medical lectures at some University, College or incorporated school recognized by the Council, a session to consist of six months' lectures on each subject, of having attended the practice of an hospital for a period of eighteen months, and of having spent a period of six months in the office of a regularly qualified practtioner in compounding medicine. The examinations may be optional on the part of the student at the end of each year, after the first year he may pass on the following subjects: Anatomy, including the bones, ligaments, muscles and viscera of chest and abdomen; physiology of locomotion, respiration, circulation and digestion; chemistry inorganic, and botany. In the second year's examinations the subjects are: Anatomy other than those in the

1st year; physiology other than those of 1st year; chemistry and sanitary science. At the end of the third year the subjects are: Anatomy, surgical and demonstrative; pathology, medical and surgical; jurisprudence; operative surgery and operative midwifery. In the 4th year: Toxicology; materia medica; theory and practice of medicine; midwifery and diseases of women and children; surgery; and clinical examinations on all the practical branches. All persons desirous of practising in Ontario are obliged to pass an examination equivalent to that indicated above after having given evidence of regular and uninterrupted study for four years. Graduates from British Universities and Colleges are admitted to examination, but the Council have the option of admitting a British graduate to registration without examination; this, however, has never yet been done. Registration gives the required status, and without it the person so unregistered is disqualified, and holds no legal status as a medical practitioner. In the Province of Quebec we are under a somewhat different regime. The profession in this Province is incorporated under the name and style of the College of Physicians and Surgeons of the Province of Quebec. The College meets every third year, and elects from its members 40 governors—these are the representatives of the profession, and in their hands is left the destiny of the medical ship of state for the ensuing term of three years. The Board of Governors is not an examining body; they appoint examiners to examine candidates for admission as students of medicine, and the subjects exacted are the same as those demanded by the Council of Medical Education and Registration of Great Britain. After having passed his preliminary examination the student of medicine has to pursue his medical studies for a period of four consecutive years, during which time he has to attend three sessions of six months' courses of lectures on the various branches of medical science at some University, College or Incorporated School of Medicine recognized by the Board of Governors. And he has to attend the practice of an hospital of over sixty beds, for a period of eighteen months. The qualification conferred by

the teaching body, its diploma or certificate, entitles the holder to registration without further test by examination, and to secure an efficient system of teaching and examination, the Board of Governors are required to appoint two or more assessors who shall visit and attend the examinations at the schools. We copy the clause in the Act, which runs as follows:

"It shall appoint assessors not of its own body, but from among the registered members of the College, to visit and attend the medical examinations of the various Universities, Colleges and Incorporated Schools of the Province, and to report to the Provincial Medical Board upon the character of such examinations. The assessors must not be chosen from the Professors of any of the said Universities, Colleges or Incorporated Schools, and should such report be at any time unfavorable to any University, College or Incorporated School, the Provincial Medical Board shall in such case, and under such circumstances, have the power to refuse the registration of the degree or diploma of the institution so reported upon until such method of examination shall have been amended." The above is clause 4, section 12 of the Act, and is sufficiently explicit.

To enter on the study of medicine in this Province the student is obliged to give evidence, by examination, of proficiency in preliminary education. This examination is equivalent to that exacted in England, and is accepted by the General Council of Medical Education and Registration of Great Britain. He has then to pursue his medical studies uninterruptedly for four years at a recognized University, College or Incorporated School of Medicine, and what is meant by recognition is indicated in the clause above quoted. The College of Physicians and Surgeons of the Province of Quebec has hitherto acknowledged and accepted British degrees for what they set forth. If any man presents his papers and they are deficient in any particular, he is expected to satisfy the Board of Examiners on this point, or if he fails or refuses to do so, registration is withheld. In Canada we are general practitioners, and the distinctions recognized in the mother country are unknown here, so that a man to register in this Province must possess the double

qualification. We say that hitherto the Provincial Medical Board of this Province has recognized all British degrees and diplomas. But by the recent Act the power is delegated to the Board to admit or refuse, at its option, registration to the holders of medical degrees or diplomas from any British or Colonial University or College. The action of the Board of Trade of Great Britain appears to have been forced upon that body from the great laxity which for years has prevailed in supplying the merchant marine with surgeons. This has been a grievance which demanded attention. In the London *Lancet* of March 4th, 1876, page 367, we find the following item: "Some ten days ago was posted in the letter cage of the Marischal College, Aberdeen, the following notice :—'*Seal Fishing.*—Wanted, immediately, a surgeon for the S.S. "Mazinthien," sailing from Peterhead on Thursday or Friday next (24th or 25th). A junior student not objected to. Must be a good shot.' * * We commend this interesting notice to the attention of the Marine Department of the Board of Trade." The subject of ship surgeons to emigrant vessels, and the laxity displayed, we might characterize it by a much stronger term, in supplying vessels putting to sea with unqualified persons, had become such a grievance that it was brought up on the floor of the British House of Commons and a return demanded of the names, ages and qualifications of ship surgeons leaving British ports. The return which was made left the Board of Trade no alternative but to enunciate the determination not to permit emigrant vessels to clear for sea without a duly qualified medical practitioner being in charge. So far we consider that the action of the Board of Trade was in every particular just and reasonable. But while we agree with the necessity and commend the action of the Board of Trade, we must respectfully submit that Colonial surgeons holding qualifications equivalent in every respect to those conferred by British Colleges, should not be excluded from serving on board of vessels which are identified with the progress and enterprise and wealth of the Colony; vessels that are performing the passenger traffic of the Colony, that are subsidized by the

Government of the Colony, that carry the mails of the Colony, and that are in every way Colonial vessels, except in being registered as British ships. If, as Colonists, we attempted to supply the marine service with men who were professionally unqualified,but who possessed the only,but unmistakable capacity of being good marksmen,then, indeed, might the Board of Trade, in all justice and in the cause of humanity, object. Such, however, cannot be advanced, and in conclusion we can merely state that we have entered thus fully into the method of making doctors in the two most important Provinces of this Dominion with a view of laying the whole matter before those who may be interested. And as an evidence of the kind of men who enter the merchant marine, we subjoin a letter addressed to G. W. Campbell, A.M., M.D., Dean of the Medical Faculty of McGill University, from Sir Hugh Allan, the largest ship owner in this country, and head of the firm of Allan Brothers, Liverpool, whose line of steamships have for over twenty years traded to our ports; a line of steamships that are second to none on the Ocean. This Colony is largely indebted for its present condition of prosperity to the industry and enterprise of the Messrs. Allan. They were the pioneers of the steamship service to which Canada owes much of its present wealth.

ALLAN LINE OF ROYAL MAIL STEAMSHIPS.

SIR HUGH ALLAN, }
ANDREW ALLAN. }

H. & A. ALLAN, Agents.

MONTREAL, 19th January, 1877.

DEAR DR. CAMPBELL,—Our Agents in England have received notice from the Board of Trade in London, that from henceforth our steamships will not be allowed to clear at the Custom House in England, unless the Surgeons on board are provided with Diplomas from some College in England, Ireland or Scotand.

I am totally ignorant of the reason why this regulation is proposed, or of any good to be attained by it.

We have for the last twenty years carried Canadian Surgeons on board of our steamers, as well as English ones, and the result of our experience is, that the Canadian Surgeons are quite equal both in professional acquirements, and gentlemanly bearing, to those we receive from the Colleges in England.

I therefore am not disposed to submit to this requirement, inasmuch as I think it is a great injustice to the institutions of

this country, as well as to the young men who study therein, and in point of fact it is a slight upon the Dominion itself.

I have written to the Government urging them to take action n this matter without delay, and I write this letter to you with the view that you should bring it before the authorities of the University of McGill College, or in any other way that you think most likely to attain the object I have in view, and that is a full and perfect recognition of our own medical men as being equal to any others.

Yours, very truly,

(Signed,) HUGH ALLAN.

DR. G. W. CAMPBELL,
Dean of the Faculty of Medicine,
McGill University.

FOREIGN MEDICAL PRACTITIONERS IN FRANCE.

Some discussion has arisen in English and other journals in respect to a Bill which was introduced before the Chamber of Deputies, France, by M. Marvais, and which provides that a foreigner can only be authorized to practice medicine or surgery on the territory or the Republic after having passed the test examinations prescribed by French law. And that no one in the practice of the medical profession in France can adopt the title of Doctor, unless he has obtained that title before a French Faculty. The law of France bearing on foreign medical practitioners has hitherto given the power to the Minister of Public Instruction to admit the practitioner on the strength of his foreign diploma to exercise his calling in any one department of France, without requiring him to submit to examination, or the applicant can submit to examination for the diploma of *Officier de Santé* without further study, which is equivalent to a surgeon's diploma, and by which he can practice his profession in a particular locality, but which does not give him legal authority to practice in every portion of the French Republic. It has been stated that the bill, as introduced by M. Marvais, would prevent, absolutely, all foreign physicians or surgeons visiting French territory in such capacity, and that physicians and surgeons of eminence would be unable to visit patients sent by them to

French watering places, or health resorts. From all we can learn from the published reports in the *London Times* it appears such an idea never was contemplated by the Bill in question. France, like other countries, has been, perhaps, overrun by spurious medical practitioners, and it appears to us that the Bill in question is a salutary measure, one which was in all likelihood urgently demanded. There can be no hardship to a doctor, who has any claim to that name, if he is desirous of residing in France, and exercising his calling, to be expected to give evidence by a practical test, of his knowledge of his profession. A French student of Medicine must pass through a regular course of study at the hospitals, and submit to several rigorous examinations, before he receives the authority from the state to practice as a physician or surgeon. Every state is expected to look after the welfare of its own subjects, and on the one hand should, in this connection, protect the interests of the children of the soil, and on the other rest satisfied that the lives of its subjects shall not be imperilled by the incompetency of foreigners, who for their own pecuniary advantage, elect to reside in its territory and practice as physicians or surgeons.

CODDING.

This is a slang phrase in common use amongst school-boys, on the other side of the border, which is, we believe, of celtic origin, it is meant to signify misrepresenting, humbugging, joking—the precise derivative of this term we are unable to supply. Some very remarkable statements were made recently by an antivaccination lecturer in respect to the published statistics on vaccinal syphilis by Dr. Ballard of London, Eng., which have been repudiated by that gentlemen in a letter which he addressed to the Mayor Dr. Hingston. From the remarkable similarity of the lecturer's name in sound if not in orthographical construction, we suggest that possibly there may be some connection between the two, and therefore the antivaccination lecturer, might, we think, in future be styled with perfect correctness, Codder.

CANADA
MEDICAL & SURGICAL JOURNAL

Original Communications.

A CASE OF PROGRESSIVE PERNICIOUS ANÆMIA,

(IDIOPATHIC OF ADDISON.)

—BY—

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The following case occurring in the practice of Dr. Gardner, is recorded as a contribution to the literature of a disease, rare, but by no means new, in any sense, concerning the pathology of which we have still a good deal to learn, and concerning the succesful treatment of which we as yet know nothing.

G. A., æt. 52, a native of England, employed in a spike factory, first came under observation on the 5th November, 1876. He is a thin, spare, moderately well-built man of average stature, and, with gray hair and beard.

He is one of a large family, all of whom, except some who died in infancy, are now alive. His mother was very subject to diarrhœa. All of the family have had at one time or another serious illnesses, which, however, in their nature, have no bearing on the present case. Two or three members of the family have had a tendency to bleeding at the nose.

At the age of between six and seven, shortly after coming to Canada, he had a long illness of five or six months duration, the nature of which, beyond the fact that it was attended with fever of remittent type, could not be ascertained. After recovering from this illness, he continued to be very healthy and active, suffering from little except somewhat frequent, slight, and easily-controlled bleedings from the nose. He never had had free bleeding from slight wounds. He was, however, subject to occasional attacks of diarrhœa. During the last few years he had occasional attacks of lumbago, and pains in some of his joints. None of these complaints prevented him for more than a few days from continuing his employment, which, until within some months previous to his being laid up, involved a great deal of muscular exertion.

About five years ago he lost, within three months, the only two sons of his family, and his friends assert that, although he did not display much emotion, he took the bereavement greatly to heart, and that since then his health has greatly failed, that in particular he has become weaker and lost color.

Nearly two years ago this became so decided, that his friends induced him to go away for a change of air. He accordingly went to Toronto on a visit to a sister. During the first few days he felt better, but after exposure to cold and wet he was seized with an illness, setting in with rigors, and attended with cough, bloody sputa, and delirium. This illness lasted a fortnight, and was called by his medical attendant congestion of the lungs.

Ever since this illness he has been gradually growing paler and weaker, and liable during the summers, especially that of 1876, to frequent diarrhœa, never very severe, but rather constant. He would often have in the morning one or two loose motions, and during the day have no further trouble from it.

The symptoms of which he specially complained were weakness, attacks of shortness of breath, when he walked in the cold air, especially if he faced a wind, and diarrhœa—five or six motions in each twenty-four hours. Notwithstanding these symptoms he had been attending regularly to his occupation, which, however, did not involve much muscular

exertion. At this time the most striking feature of his case was a remarkable waxy pallor of the skin and mucous membranes, and a pearly appearance of the white of the eyes. He is somewhat deaf; this he attributes to his occupation in a noisy workshop.

Pulse rather more frequent than normal; temperature normal. Appetite by his own account and that of his friends, is good—he is able to eat meat; suffers no distress after food. Sleeps very soundly, and sleeps a great deal, much more than previous to the failure of his health. If he sits down and is let alone he is sure to go asleep. Is compelled to be up two or three times each night to make water. Urine very highly coloured; quantity in twenty-four hours thirty-four to forty ounces; specific gravity varied from 1012 to 1016 at different times; no albumen; no sugar; no bile pigment; no tube casts.

Complains of some numbness of his fingers, hands and forearms; has difficulty in buttoning his clothes, or in using his tools. Complains of a throbbing, rushing sensation in his temples. Says that he has suffered from decided diarrhœa for rather more than a month, but the number of motions in each twenty-four hours has not exceeded five or six. They have been painless and free from blood. Physical examination of the chest reveals nothing abnormal. The superficial cardiac dulness is normal in extent; the apex-beat natural in position; heart-sounds not specially changed—the first sound perhaps less accentuated than normal. There is a distinct bruit in the vessels of the neck and upper part of the chest.

The spleen is normal in size, or at all events not enlarged; the liver not enlarged.

The most careful examination reveals nowhere any pigmentation or bronzing of the skin. There is not the slightest evidence of enlargement of any of the superficial lymphatic glands. The symptom of which he complained most was the shortness of breath, which, as already mentioned, came on when he attempted to walk facing a wind, and was so urgent as to compel him to stop for a minute or two till he recovered his breath.

The liq. ferri pernitratis was prescribed in doses of fifteen minims in a wine glassful of water three times a day, and also a diet from which vegetables and fruits were to be excluded. At the end of a week he returned to say that his diarrhœa had almost ceased, and that he fancied himself a little better. As on the previous occasion, he had walked from his house—fully three-quarters of a mile. There was no other change to note in the symptoms.

He continued to come regularly at intervals of a week for the next three weeks. During this time the diarrhœa had entirely left him; he was, he said, eating fairly, yet he was growing steadily weaker. The numbness of the fingers, hands and forearms was more marked, the difficulty in buttoning his clothes greater, the throbbing and rushing sensations in the head more distressing and the drowsiness more troublesome. A loud systolic bruit, much intensified by exertion, had developed in the region of the heart, loudest at the base, but heard also at the apex. The murmur in the vessels of the neck had become exceedingly loud.

At this time there was no œdema of face or ankles. The attacks of dyspnœa had been much mitigated by wearing a respirator over the mouth on going into the cold air.

He continued to take the pernitrate of iron during the first three weeks, but the only effect noticed from its use, if indeed it deserves the credit, was the cessation of the diarrhœa. The ammonio-citrate was then given instead for the next two weeks, but without the least benefit. Cod liver oil was next prescribed, but it disagreed so markedly that it was discontinued at once. He had not been seen for a fortnight, when, on the 29th December, a message was received asking that he should be seen at his house. There was little change to note in his condition, other than an intensification of the symptoms previously noted. The pallor was more intense, the weakness greater, the drowsiness and deafness more marked, but in addition there was slight œdema of the ankles and eyelids. Vallet's pills were now prescribed and taken for a week, but without the slightest benefit, as he continued to grow steadily weaker and worse, being scarcely

able to leave his bed. On the evening of the 11th January of the present year, an urgent message to see him was received. On reaching his house it was found that on being assisted out of bed to make water, he had had an attack, apparently syncopal in its nature, and that at times, especially when left to himself, he was rambling and incoherent. He, however, answered questions correctly. He was very restless; pulse 110, temperature 102°. He had also been vomiting.

Jan. 12th.—Noon—Temperature has fallen to 101°. Other symptoms as at last report. Dr. Howard, Professor of Medicine, McGill University, saw him in consultation at this visit, and fully concurred in the diagnosis.

At 10 p. m. the pulse was 105 and the temperature 97·5° Retention of urine, requiring the use of the catheter. Urine very high-colored, red-brown, acidity normal, no albumen, sugar or bile-pigment ; specific gravity, 1016.

Jan. 13th.—11 a. m.—Pulse 98, temperature, 97·3°. Not so restless, still incoherent; vomits everything ; catheter has to be introduced regularly.

Jan. 14th.—Died at 3 a. m.

The blood examined during life presented the following appearances in a specimen obtained, in a capillary tube, fifteen hours before death, and examined without the addition of any reagent, 30″ after withdrawal. (Hartnack, No. 9 im. and Oc. 3.)

About one-half of the red blood corpuscles run together to form rouleaux. The majority of them appear of large size, but do not present the characteristic round contours of these bodies ; many are ovoid, others lozenge-shaped, or of various forms, with irregular projections and processes. Isolated corpuscles look of the natural pale yellow colour, but the alternating light and dark centre with the change of focus is not so distinct as usual. On touching the top cover and causing them to roll over, many do not present the biconcave appearance, but look thin and flattened out. A limited number are crenated. In each field certain small round red corpuscles are seen, sometimes as many as six or eight. They are spheres, not biconcave, of

a pale yellow colour, occasionally crenated or irregular in form.

The measurements of some of the coloured elements are given below (Hartnack No. 16 im.), from which an accurate idea is obtained of the remarkable discrepancies in size. About forty measurements were made of corpuscles taken at random in two or three specimens obtained a few days before death. Of these one was $\frac{1}{1333}$" by $\frac{1}{2610}$" of an inch, being somewhat elongated. Five ranged from $\frac{1}{2750}$" to $\frac{1}{2615}$", these being the extremes. In twenty-two the range was from $\frac{1}{3000}$" $\frac{1}{4200}$" to In this group the usual looking red disks occurred. In five the diameter varied from between $\frac{1}{3000}$" and $\frac{1}{3000}$". In five the diameter was less than the $\frac{1}{3000}$", the lowest being $\frac{1}{3874}$".

Prolonged examination failed to discover a single nucleated red corpuscle.

The colourless corpuscles did not appear relatively increased. One or two were seen in each field of the No. 9 and 3. The measurements in five corpuscles ranged from $\frac{1}{2500}$" to $\frac{1}{1200}$". They were quite natural looking, and displayed a remarkable degree of vitality. In a slide mounted and surrounded with paraffine at 1 P.M., the amœboid movements were very active, the temperature of the room being about 60°.* At 7 P.M. the slide was carried in the hand a distance of a quarter of a mile to the house of a friend (temperature ——), and the irregular changes in outline were still observed, and continued until 8:40, when the observation was omitted. There was an entire absence of Schultze's granular masses.

Autopsy.—Thirty-two hours after death.

Body that of a well-built man of fair muscular development. Hair grey. No emaciation; panniculus adiposus well developed, especially over abdomen. Skin of extraordinary pallor,

* It may be here mentioned that the statement of Ranvier, Traite d'Histologie (p. 210), that the amœboid movements of white blood corpuscles do not go on at ordinary temperatures is incorrect. In University sity College Laboratory, London, it was found on one occasion that the amœboid movement contined in the colourless corpuscles twenty-four hours after removal from the body. The blood was sealed in a capillary tube, and remained at the ordinary temperature in the month of June.

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with slight lemon tint, the shoulders marked with patches of deeper yellow hue. A few old psoriasis spots seen in the region of the elbows and knees. No petechiæ. Lineæ albicantiæ in the skin of groins, and upper and outer aspect of thighs, and on the outer edge of anterior folds of axillæ. Fingers slightly clubbed, and the nails of both hands markedly incurvated. Rigor mortis moderately well marked. Post mortem stains scarcely perceptible. No enlargement of the superficial lymphatic glands. No cadaveric odour.

Brain.—Not examined.

On making the preliminary incision a layer of deep yellow fat, fully an inch in thickness, is cut through over the abdomen. Muscles of the thorax of a remarkably healthy red colour. In the abdominal cavity the position of the viscera normal. Omentum moderately fatty. In the thorax a considerable amount of fat over the pericardium. The left pleural sac contains twelve ounces of bloody, yellowish-tinged, serum. A few strong adhesions posteriorly. In the right pleural sac ten to twelve ounces of fluid of the same character. Adhesions more numerous at apex and sides.

Pericardium.—Contains six drachms of a yellowish, bloody serum. No ecchymoses on either leaf.

Heart.—Large, excessively flabby. Sub-pericardial fat abundant about the base and in the anterior ventricular groove. Patch of attrition over upper part of right ventricle in front, and another behind, near the inferior vena cava. On opening the heart in situ an ounce of blood, with one small coagulum, in the cavities of the right side, and ten drachms in those of the left. Organ flaccid, and walls collapsed when laid on the table. Right auricle normal. Right ventricle somewhat dilated, the endocardium stained by imbibition. Tricuspid valves a little thickened and gelatinous at the edges; orifice of normal size. Pulmonary semi-lunar valves healthy, one segment fenestrated. Cavity of left ventricle large, walls of normal thickness. Mitral valves quite healthy, a little stained; orifice of proper size. Aortic semi-lunar valves a little opaque; slight atheroma at their bases, and on the aorta opposite their

free borders. Sinuses of Valsalva very distinct. Nothing abnormal in the left auricle. Muscle substance of the organ exceedingly pale, having a yellowish, faded-leaf appearance, especially marked in the walls of the left ventricle.

Aorta., both arch and trunk of full size. Beyond the left sub-clavian there is a flattened patch of atheroma, about the size of a half-penny.

Lungs.—Deeply pigmented; crepitant throughout; lower lobes œdematous and dark in colour posteriorly. The mucous membrane of the *Trachea* at the bifurcation, and extending irregularly nearly to the larynx, is represented by a number of bony plates, lying immediately upon the cartilages, which are themselves very dense, and partially ossified.

Spleen.—Weight, six ounces; soft and flabby. Capsule a little opaque. On section, pulp soft, of a light brownish-red colour. Trabeculæ distinct. Malpighian corpuscles not evident. Very little blood in the organ; none could be obtained from the splenic vein.

Left Kidney.—Length, 5 ". Unusual amount of superficial fat. Capsule loosely attached, and on removal leaves a very anæmic-looking organ. No atrophy of the cortex, which is pale and bloodless. Pyramids, except at the bases, also pale. *Right Kidney*, 4½ " long, dark red in colour, uniformly congested, forming a striking contrast to the other. Capsule easily detached; stellate veins prominent. On section, both cortex and medulla contain much blood.

Supra-renal Capsules.—The right is soft in the centre, and somewhat larger than the left, but nothing unusual about either.

Bladder.—Distended with pale urine. Mucous membrane healthy looking. Prostate gland of full size.

Tonsils and glands at root of tongue not enlarged. Several ecchymoses beneath the mucous membrane of the anterior wall of the pharynx. *Œsophagus* presents nothing unusual; a few small extravasations are noticed near the cardia.

Mucous membrane of *stomach* pale, and at the cardiac end thin; at the pylorus it is thicker. *Duodenum* healthy; common

bile duct is pervious. *Jejunum* contains a quantity of dirty yellow mucus. Mucous membrane is pale. In the *ilium*, Peyer's patches are scarcely perceptible; the solitary glands towards the ileo-cæcal valve are alone distinct. In the *large bowel* the mucous membrane is anæmic. No ulceration. Scybalæ in transverse and descending colon.

Liver.—Rather small, of a light yellow colour, especially in the left lobe. Capsule smooth. On section a small quantity of liquid blood is seen in some of the hepatic veins. In places there is a very slight injection of the intra-lobular veins, which relieves the otherwise uniformly pale surface.

Gall-bladder.—Full of dark tarry bile.

Pancreas.—Looks healthy.

Abdominal blood-vessels almost entirely empty. No blood in inferior vena cava or aorta. Intima of both healthy-looking. *Thoracic Duct* pervious throughout. Mesenteric and retro-peritoneal *lymphatic glands* small, the former unusually so, requiring considerable searching to obtain any. The amount of blood in the body appeared remarkably diminished, and it was only by pressing along the limbs that sufficient could be obtained from the veins to fill a small homœopathic phial.

Piece of the sternum, the upper half of right fibula, the inner third of left clavicle, half a rib, and one of the last dorsal vertebræ were removed for the examination of the marrow. Blood was collected from the heart, and junction of left jugular vein with the sub-clavian.

A striking feature in the autopsy is the extreme anæmia of the organs, their almost entire bloodlessness, and consequent pallor, the right kidney excepted

HISTOLOGICAL EXAMINATION.

The blood taken from heart and veins shows the same general characters noticed during life. Prolonged examination of different specimens made for this special object resulted in the detection of two nucleated red blood corpuscles.

Heart.—The fibres are in a condition of extreme fatty degeneration, the striæ being obscured by the number of densely

crowded droplets and fine molecular fat; only here and there a fibre occurs in which the striæ are faintly seen. In teased preparations numerous short bits occur, together with oil-drops and granules of fatty matter. In places there appears to be a good deal of interfibrillar connective tissue with fat cells.

Muscles of the Trunk.—The fibres of the thoracic muscles—which were observed to be of such a natural appearance—present no trace of fatty degeneration.

Spleen.—The ordinary corpuscles of the pulp, together with elongated, sometimes branched, cells of the retiform tissue are the chief elements seen in teased specimens. The red corpuscles have lost their colouring matter. A few cells containing red blood corpuscles are seen, but no nucleated red cells.

Kidney.—Teased preparations show the epithelium of the tubules, both in the cortex and pyramids, covered with fatty matter in the form of minute drops and fine granules; nowhere, not even in the large collecting tubes, are the cells distinct. The Malpighian corpuscles also contain many granules and small oil-drops, and the same exist abundantly in the field.

Liver.—Cells are stuffed with oil-drops; none noticed without them, while in many the protoplasm and nucleus are entirely obscured. Free fat exists infiltrated between the cells, and in the field. In a few, bile pigment is seen.

Mesenteric Glands.—Teased portions present a large number of perfectly normal-looking lymph corpuscles, among which the connective tissue elements occur in the usual proportion. Many of the small vessels and capillaries have their walls uniformly studded with fat grains, and may be traced as dark branching lines. In others, the deposition is not so extensive.

Nothing abnormal observed in the axillary lymphatic glands.

Medulla of Bones.—The marrow of all the bones examined—sternum, ribs, clavicle, vertebra, fibula—is of a dark violet-red colour, thick, about the consistence and colour of the spleen pulp in fever. In the clavicle it is more diffluent, of a lighter red colour, and to the naked eye looks a little fatty—an appearance not noticeable in the other bones, not even in the shaft of the fibula.

On microscopical examination, the following elements were found :—

(1) Colourless corpuscles—marrow cells—of various size, with granular protoplasm, and bold vesicular nuclei. The greater number of these are larger than white blood corpuscles, and usually have a single nucleus, sometimes two. Others are smaller, more approaching the blood corpuscles in form, while in all the specimens examined, small round cells, like ordinary lymph corpuscles, are are also found. The above represent the common colourless elements found in marrow, and they form the majority of the corpuscles in the field. In eight of the larger cells the extremes of measurements were $\frac{1}{1571}''$ by $\frac{1}{1833}''$ and $\frac{1}{2200}''$ by $\frac{1}{2895}''$.

(2) Coloured blood corpuscles, of which two varieties are seen; (*a*) ordinary biconcave disks, somewhat irregular in shape, and often, as noticed in the blood during life, provided with long processes. They are abundant, forming the large proportion of coloured elements. In the fibula, sternum, and ribs the colouring matter is retained, while in the vertebra and clavicle it has disappeared from most of the corpuscles, and they are recognizable only as outlines. (*b*) Small round red corpuscles, non-nucleated, from one-quarter to one-half the size of ordinary corpuscles, and similar in appearance to the small forms seen in the blood. They occur most numerously in the marrow of the fibula, where they form fully one-fourth of the coloured corpuscles. In the sternum and ribs they are not so abundant, though occurring in each field. As described in the blood itself, they do not appear to be biconcave disks, but spheres. The colouration is quite as intense as in form *a*, and a few were observed to be crenated.

(3) Nucleated red corpuscles, the "transitional" forms of Neumann, which are numerous in the sternum and ribs, less so in the fibula, while in the clavicle and vertebra they occur scantily, or, owing to the general decolorization of the red corpuscles in these bones, are seen with difficulty. As shown by the measurements given below they are as a rule larger than ordinary blood corpuscles, but present, like them, a perfectly homogene-

ous coloured stroma, in which a finely granular nucleus is imbedded. They are spheres, not biconcave, as a rule round, though frequently irregular in outline, or with one end pointed and prolonged. The intensity of the colouration in most cases equalled that of the ordinary red corpuscles, in some instances being deeper, in others not so marked. The nuclei are either round or elliptical, and occupy from one-quarter to one-half of the body of the cell (see measurements). They are solid, granular, and inside the corpuscle look coloured, though not so deep as the surrounding substance. The presence of nucleolus could not be determined, The position in the cells is variable; in specimens examined within a short time after the post-mortem they appeared to be chiefly centric, but in preparations taken the next day very many of them had become quite peripheral, while others had protruded almost through the corpuscle, when it could be clearly seen that the nucleus was colourless. In several instances the nuclei are seen to be entirely outside the cells, though remaining attached to them. In this condition they look not unlike the small lymphoid marrow cells, and it is only the large size of the corpuscles to which they adhere, and the fact that in the same field others may be seen half-way out, that enables a correct opinion to be formed. In three or four instances dumb-bell-shaped nuclei were noticed. Cells with two nuclei were not uncommon, and instances with three and four were observed. As remarked above, the nucleated red forms are numerous in the sternum and ribs, six to eight being seen at once in the field of the No. 9 im. and 3, while in the fibula not more than three or four were noticed in any single field. In fifteen measurements of these forms, eleven were above the $\frac{1}{2000}''$; five being $\frac{1}{1425}''$. The following measurements are of three corpuscles with their contained nuclei:— (1) $\frac{1}{1774}''$ by $\frac{1}{2200}''$; nucleus $\frac{1}{2019}''$ by $\frac{1}{2896}''$. (2) $\frac{1}{2207}''$ by $\frac{1}{2391}''$; nucleus $\frac{1}{3300}''$ by $\frac{1}{3000}''$. (3) $\frac{1}{2037}''$ by $\frac{1}{1964}$; nucleus $\frac{1}{3066}''$ by $\frac{1}{3235}''$. A good idea of the irregularity in outline of these corpuscles and the slightly elliptical character of the nuclei may be gathered from the above.

(4) Cells containing red blood corpuscles. These are very

abundant in the marrow of the vertebra, three or four occurring in the field at once, and containing from five to six red corpuscles, the colour and outlines of which in most cases are preserved. In the sternum and ribs they are not nearly so numerous; in the fibula and clavicle they were not observed.

(5) Myeloplaques, of which one or two only were met with in the marrow of the sternum and rib. Neither in theshaft nor epiphysis of the fibula could these forms be determined.

(6) Fat cells, which are present in marrow of the clavicle in small numbers, absent in the sternum, vertebra and rib. In marrow from the fibula an oil-drop is occasionally met with in the field, but here also they are almost entirely absent.

(7) The octahedra crystals, first described by Charcot, and which always occur in the marrow from twelve to thirty-six hours after death.

Remarks.—Apart from the clinical features and general pathological appearances of the above case, which show it to be an exceedingly typical one, there are two points of special interest, viz., the appearances of the blood, and the condition of the bone marrow, both of which are deserving of a few comments.

Prof. Eichorst has drawn attention in a short note* to the presence in the blood of patients suffering with pernicious anæmia of exceedingly small red corpuscles, which he regards as pathognomonic of the disease, and affording a valuable diagnostic sign, being present in all of his cases, seven in number. The following are his own words:

"Some of the red globules are of normal size, but very pale and have lost their tendency to form rouleaux, others scarcely attain ¼ the diameter of a normal, perfect corpuscle, so that they look like small drops of fat tinged red, and have not their biconcave appearance." Towards the latter stages of the disease he states that they increase, so that before death they may equal in number the common forms.

The histological examination, both before and after death,

* Centralblatt f. die. Med. Wissen. June 24th, 1876.

and the measurements above given, show that in this instance the blood did contain an unusual number of small coloured elements, and is so far confirmatory of Eichorst's statement. Though not abundant, they were quite numerous enough to attract attention, and offered a striking contrast to the other red corpuscles about them, many of which were large, flattened out,—and less biconcave than usual. A great variation in size was noticed in all the specimens examined, and range as given in the measurements, from $\frac{1}{3574}''$ to $\frac{1}{2000}''$ must be regarded as very remarkable. That these tiny elements are red corpuscles there can be no doubt, as with No. 16 Hartnack (1-36th) they appear homogeneous, of a pale yellow colour, and, like the larger forms, they are sometimes crenated. In the third case reported in Dr. Howard's paper on the subject,* the blood of which one of us (Dr. O.) had an opportunity of examining in the spring of 1875, the note on the appearances of the blood is as follows: "There is a somewhat unusual variation in size among the red corpuscles, many of them scarcely measure the $\frac{1}{3000}$th part of an inch in diameter. The white corpuscles also present slight variations in size and are more granular than normal. Max Schultze's granular masses are abundant." Cohnheim, in a case which will be more fully referred to hereafter, states that the presence of the small blood corpuscles was established. Quincke† also speaks of the inequalities in the size of the red blood corpuscles, many of which were small and round. In three of his cases these smaller forms presented great irregularities in contour. These are, I believe, the only positive observations on this point. On the other hand, there is a note by Prof. Grainger Stewart of Edinburgh,‡ in which he states, that the blood in two cases of pernicious anæmia, under treatment at the time, did not present the small red corpuscles described by Eichorst. Among recent cases in which the blood was carefully examined,

* Read before the International Medical Congress at Philadelphia, and being published in the forthcoming Report.

† Volkmann's Sammlung Klinischer Vorträge, No. 100., translated in Medical Times and Gazette, Oct. 14th, 1876.

‡ Brit. Medical Journal, July 8th, 1876.

and no mention made either of small forms or great variations in size are those of Pepper,* Scheby-Buch,† Pye Smith,‡ Lepine.§ Bradford,‖ in his case, made a most careful examination of the blood, and reports not much variation in size, but that all are rather smaller than usual. In Ferrand's case¶ many of the red blood corpuscles were larger than normal, no mention is made of any diminution in size. In Bradbury's case** the red corpuscles were larger than normal, pale, and exceedingly irregular in shape. No small forms were noticed. Burger†† did not notice any great variations in size, but a peculiar paleness about them. Immermann‡‡ makes no mention of alterations in form or size in the red corpuscles.

The presence of very small red disks in healthy blood is not common, still one of us (Dr. O.) has occasionally measured forms not $\frac{1}{5000}$th of an inch in diameter, both in his own and in the blood of other quite healthy individuals. Laptschinsky§§ has also found these small corpuscles in the blood of patients with various febrile affections, and speaks of them as being numerous, about $\frac{1}{3}$ the size of ordinary red corpuscles, some having an intensely red colour, whilst others are pale. In the blood from the above reported case, drawn in capillary tubes, and not examined until some hours after, many of the red corpuscles appear as deeply coloured spheres, slightly smaller than natural. This is a physical alteration, resulting apparently in a change from a disk-shape to a sphere, with, perhaps, a condensation of the corpuscle. These forms were not present in perfectly fresh blood, but could be seen in the slide six or eight hours

* Amer. Journal of Med. Sciences, Oct. 1875.

† Deutches Archiv. f. Klin. Medicin, April, 1876.

‡ Virchow's Archiv. Bd. 65. hft. 4. Dec. 1875.

§ Bulletin General de Therapeutique, 30 Julliet, 1876.

‖ Boston Medical and Surgical Journal, May, 1876.

¶ Bulletin General de Therapeutique, Dec. 15, 1876.

** Brit. Medical Journal, Dec. 30, 1876.

†† Berliner Klin. Wochenschrift, No. 33, 1876.

‡‡ Ziemssen's Handbuch der speciellen Path. and Therap. Bd. xiii. Art. Pro. Pernic. Anæm., 1875.

§§ Centralblatt f. d. Med. Wissen. No. 42, 1874.

after mounting. It is interesting to remark with reference to the large corpuscles, that Hayem* states that during a long course of iron—just such as this man had been subjected to—the red disks undergo an increase in volume.

Until we possess more definite knowledge than we do at present of the variation in size of the red corpuscles in constitutional and febrile diseases, it would be hasty, from the limited number of observations, to conclude that the presence of the small coloured corpuscles is pathognomonic of, or even affords a positive diagnostic sign in, progressive pernicious anæmia. It remains for subsequent observors to note accurately the size of the red corpuscles in this disease, and it will not be long before we are in a position to arrive at a satisfactory conclusion on this interesting point.

In a disease like pernicious anæmia, which after death is is not chsracterized by any important lesion in the viscera or glands, it was natural that attention should be directed to the bone marrow, a structure now ranked among the blood-forming organs, and which in leukæmia, and pseudo-leukæmia (anæmia lymphatica, or Hodgkin's disease) has been found remarkably altered, so much so that myelogenous forms of both have been described. With the two affections just named the one in question is closely allied, and in its clinical features almost identical. From the splenic and lymphatic forms of both, it is distinguished by the absence of enlargement of the spleen and lymphatic glands, and additionally from leukæmia by the failure of any increase in the white blood corpuscles. In those rare cases of leukæmia, where the disease is confined to the bone marrow—myelogenous form—the only distinguishing feature is the excessive number of colourless corpuscles in the blood, with, perhaps, tenderness over the aflected bones (Mosler). Immermann† quotes a case in illustration of this. In the still rarer cases of myelogenous pseudo-leukæmia, where the affection is uncomplicated with disease of the spleen or lymphatic glands, a differential diagnosis would be impossible, (compare the remarkable cases

* Bulletin General de Therapeutique, Dec. 15th 1876.

† Loc. Cit. p. 651.

given by Wood*). It is not to be wondered at that some writers (Immermann and Jaccoud†) should hint at the identity of the two diseases, or that Pepper, encouraged by the appearance of the marrow in one of his cases, should state that progressive pernicious anæmia was "merely the simple medullary form of pseudo-leukæmia."

The evidence of an implication of the marrow in this disease rests upon the following reports: the first case in which it was examined was one of Pepper's, in which the marrow of the radius and sternum was "made up almost entirely of small granular cells." Passing over a case observed by Fede,‡ and recorded as one of pernicious anæmia, but which ought to be regarded as a well-marked myelogenous pseudo-leukæmia, the next observation is by Scheby-Buch,§ in one of whose cases the marrow of the radius was pale red in colour, and contained numerous cells like white blood corpuscles, and very few red corpuscles or fat cells. In Lepine's‖ case nothing unusual was found. Burger¶ states that there was no affection of the marrow in his case. By far the most extended account of the changes in the marrow in this disease is that given by Cohnheim in a letter to Virchow.** The following is a summary of the appearances described: Marrow of all the bones intensely red; fat almost entirely absent. Microscopically there were (1), ordinary marrow cells of various sizes, some small and lymphoid in character, others large and with vesicular nuclei; (2.) coloured elements in almost equal number, of these the common, biconcave, red blood corpuscles formed a decided minority, while the number of red non-nucleated corpuscles of various dimensions was very evident. The smallest of these had the diameter of normal red blood corpuscles, the largest were more than

* Am. Journ. of Medical Sciences, Oct. 1871.

† Nouv. Dict. de Med. et de Chirurg. Leucocythémie.

‡ Quoted in Centralblatt, f. die. Med. Wissen., Oct. 16th, 1875.

§ Loc. cit.

‖ Loc. cit.

¶ Loc. cit. No. 34, 1876.

** Virchow. Archiv. Bd. lxviii, Hft., 2. Oct. 26, 1876.

double the size of colourless blood corpuscles, and between them forms intermediate in size. (3.) Nucleated red corpuscles in great abundance, and of various sizes, the majority equalling in size the smaller of the true marrow cells. The blood examined after death was also found to contain a few of the nucleated red corpuscles. In Quincke's article no details are given, and this part of the question is disposed of with the remark: "The marrow of the bone showed no abnormality." In Bradbury's case, the red marrow from the right tibia looked natural, and was made up almost entirely of granular spheroidal cells, like white blood corpuscles. In that from the sternum the cells were much larger, and red globules more abundant. Coloured corpuscles were not numerous.

These are the only facts for and against the view that pernicious anæmia is the medullary form of pseudo-leukæmia. The general statement of Quincke, and the more definite ones of Lepine and Burger, are not very satisfactory, as no details are given; still, they must be accepted as negative evidence. It may be held with Bradbury* that the changes in the marrow of the sternum and radius in Pepper's case were scarcely sufficient to indicate serious diseases of that structure, as only the normal elements were found, though in the radius in slightly increased numbers, and the same may be said of Scheby-Buch's case. In Cohnheim's case and our own the constitution of the medulla was altered, and, in addition to ordinary marrow cells, it contained lymphoid corpuscles, embryonal forms,† and red blood corpuscles of various sizes. The detection, too, in both, of the embryonal forms in the blood, though in quite insignificant numbers, places them apart from the others; and on these grounds they alone are strictly comparable with myelogenous leukæmia. Indeed, the question at once arises whether we have not to do here with

* Loc Cit.

† In a recent note in the Archiv. f. Mikroscop. Anatomie, Bd. xii. p. 796, Neumann expresses a wish that the term "transitional," as applied to the nucleated red corpuscles, should be dropped, as involving an hypothesis about their origin, advanced rather too confidently by him. He would substitute the term "embryonal" or "developmental" form.

uncomplicated cases of medullary pseudo-leukæmia, similar to one of those described by Wood*. A consideration of the symptoms will not help us, and the remarkable admission must be made, that while the ante mortem diagnosis of pernicious anæmia was correct, a post-mortem one of pseudo-leukæmia might be equally so.

The absence of these changes in the marrow in the cases of Quincke, Lepine, and Burger proves that the disease in certain cases is independent of any affection of this structure; and we must either regard implication of the marrow as an accidental complication, having but little to do with the cause or progress of the disease, or refer all cases in which it is met with to the category of myelogenous affections. Can the state of the marrow be regarded as an accidental complication, a secondary change, depending on the grave constitutional disease? Our knowledge of the condition of this tissue in disease is not at all complete, and the only observations at hand on the subject are the following:

Neumann† met with great hyperplasia of the marrow in a case of Addison's disease.

Wood, in a paper already referred to, says, that he has "made a number of examinations of long bones taken from patients dead of various chronic diseases, and never, except in a single case, found any abundance of the leucocytes;" and this was probably a case of leukæmia. In 14 examinations made by Dr. Osler of the marrow of the long bones, obtained chiefly from chronic Hospital cases, in only one was there found hyperplasia and marked alteration in its constitution; and in this instance there is a strong probability of the case belonging to the group under consideration.

Altogether, the few facts we have are opposed to the view that in chronic diseases, accompanied with anæmia and wasting, hyperplasia of the marrow of the long bones occurs as a secondary change.

Cohnheim‡ writing to Virchow, on his case, says, "You will

* Loc. Cit. p. 293.
† Quoted in Quarterly Journal of Microscopy, 1871.
‡ Loc. Cit. p 382.

certainly agree with me in taking for granted that the above described condition of the marrow stands in intimate connection with the fatal disease of the patient. That in this affection (progressive pernicious anæmia) we have to deal with a profound disturbance in the constitution of the blood all observers are at one ; and, on the other hand, it can at present be no longer doubtful that an important disease of the marrow must have a serious influence on the composition of the blood."

With this statement we concur, and are inclined to regard the affection of the marrow in our case as the *fons et origo mali.*

HOW TO DIAGNOSE CERTAIN FORMS OF INSANITY,

By Henry Howard, M.D., M.R.C.S., Eng.

Medical Superintendent Longue Pointe Asylum.

Mr. President and Gentlemen,—In the month of December, 1875, I had the honour to read before the Society a paper on "Man's Moral Responsibility, from a scientific stand-point." In that paper I endeavoured to prove to you that mind and body are one, and moreover, that as there were no two persons in the world physically alike, neither were there any two in the world whose mental organizations were exactly the same ; in fact, that no two persons in the world, if they would, could think alike. A valued friend of mine, a member of this Society, has lately placed in my hands a work by one of the greatest living authors, its title is "The Grammar of Assent," by the Rev. John Henry Newman. After speaking of the differences between man and brute, he says "And in like manner as regards John and Richard when compared with one another, each is himself and nothing else, and though regarded abstractedly, the two may fairly be said to have something in common, viz., that abstract sameness, which does not exist at all, yet strictly speaking they have nothing in common for they have a vested interest in all that they respectively are : and moreover, what seems to be common in the two becomes in fact so uncommon, so *sui*

simile, in their respective individualities. The bodily frame of each is so singled out from all other bodies by its special constitution, sound or weak by its vitality, activity, pathological history and changes; and again, the mind of each is so distinct from all other minds, in disposition, powers and habits,—that instead of saying, as logicians say, that the two men differ only in numbers, we ought, I repeat, rather to say that they differ from each other in all that they are, in identity, in incommunicability, in personality." Now, if the theory I put forward in the paper alluded to, be true, and with such an authority as I have just quoted, it will hardly be doubted, it is very easy for us to understand how the very same disease in different individuals present such different phases; and how a medical man cannot treat John and Richard exactly alike, although he knows that both of his patients have got typhoid fever. If I this evening lay down for you some diagnostic symptoms, to enable you to diagnose some certain forms of insanity, you must not expect that these symptoms will be well developed in all cases, and this will not surprise you if you bear in mind the fact that there are not two persons exactly alike physically, mentally, anatomically, physiologically, or pathologically.

You are all aware that from the very earliest history that we have of the animal man, it was a common practice amongst all peoples, to feign madness, that their lives might be spared when they fell into the hands of their enemies, a proof that madmen were not held responsible for their acts; indeed, amongst some nations they were rather feared and respected as men under Divine inspiration,and their insane babbling considered as a proof. And again, other madmen were put to death because they said they were inspired. Indeed the very latest accounts from Russia gravely inform the world that certain fanatics had been sent to work in the mines in Siberia. One called himself the prophet Esdras, and a poor mad-woman called herself the Virgin Mary. I think, myself, that all fanatics are touched in the upper story, and society would be the better if they were placed in a lunatic asylum: but to send a set of lunatics to work in the mines of Siberia, I consider a piece of barbarism.

"*The Sweet Singer of Israel*,"—David—played the madman very successfully before Achish, the King of Gath, by scrabbling on the doors of the gate, and allowing his spittle to fall down upon his beard, so that the king said, "Ye see the man is mad, wherefore then have ye brought him to me." I need not warn the members of this society not to look for these symptoms in cases of insanity; such feigning would not do in the present day.

Hamlet, when he played the fool, was simply a case, in my idea, of a madman playing the fool, which, I assure you is by no means uncommon amongst lunatics. In King Lear we find a tolerably good example of feigning madness, by Edgar son of the Earl of Gloster, to escape from the consequences of the treachery of his bastard brother. "I heard myself proclaimed, and by the happy hollow of a tree escaped the hunt. No part is free, no place that guard, and most unusual vigilance does not attend my taking, while I may 'scape I will preserve myself; and once bethought to take the *basest* and most *poorest* shape; that ever penury, in contempt of man, brought near to beast, my face I'll grime with filth; blanket my loins; elf all my hair in knots; and with presented nakedness out-face the winds and persecutions of the sky. The country gives me proof and precedent of Bedlam beggars, who with roaring voices strike in their numb'd and mortified bare arms, pins, wooden pricks, nails, sprigs of rosemary, and with this horrible object, from low farms, poor pelting villages, sheep-cots, and mills; sometimes with lunatic bans, sometimes with prayers, enforce their charity.—Poor Turlygood; poor Tom, that's something yet; Edgar, I nothing am." No one can deny but that our great poet well described a lunatic when he called him something of the basest and the poorest shape.

It is very hard, in the present day, for us to believe a man feigning madness, even to save his life, when by so doing he, a sane man, is confined as a lunatic in a lunatic asylum, it is difficult to say that of two evils he chose the least, yet it may be said, "What will not a man give for his life," though we know that there are men who would prefer to lose their lives to lose

their honor. However, it is a fact that some men do feign madness, and it is the duty of the medical man to detect such an imposture, which is sometimes a very difficult thing to do, yet it can be always done by time and perseverance. Bear in mind that no matter how extravagant may be a man's actions, even to starving himself, if he be a sane man he cannot produce physical signs, and he has in time to yield to the power of sleep. Medical men are very often taken to task, very unjustly, for the evidence they give in Courts of law, where the accused person is supposed, or known to be a criminal, particularly if it be a case of murder. Now an intelligent and experienced alienist, from long habit, and natural inference may in a moment diagnose a case of insanity so as to swear positively that the man before him is insane, yet not be able to give a satisfactory proof to a judge or to a brother practitioner, as to why he came to that conclusion. And you know, gentlemen, that it is the same in the rapid diagnosis made by some medical men in other forms of disease. You have all met with medical men who when walking through the wards of an hospital, would without any particular examination, name the disease of the different patients, and if called upon today, why, could give no satisfactory answer. Well, such evidence will not be admitted in a court of law.

The Toronto Globe for November 25, 1876, took some of our confreres of Ontario to task for evidence respecting the sanity of a man who had committed, it would appear, a most unjustifiable murder. Had the *Globe* stopped here it would have been no business of mine, but it went further, and endeavored to turn all medical testimony, in such cases, into ridicule, and therefore I joined issue with the editor of that paper through the columns of the Montreal *Gazette*. My letter bears date December 2nd, 1876, and as it bears on the question under our consideration, I beg leave to read an extract from it :—

" Does the editor of the *Globe* mean to say that every man's acts are not the result of his peculiar mental organization and training ? Does he mean to say that men don't differ as much in their mental organization, and in their ideas of right and wrong as they do in their personal appearance ? Does he mean to say that men don't differ in degree, and to a very great degree in

their intellectual capacity, which is due to their mental organization. I am sure that the editor of the *Globe* will say nothing of the sort; and if he admits, and he must do so, that there is a vast difference in men's mental organization, he is bound to admit that all men are not equally responsible for their acts, and if not equally, how much and how little ? and where does responsibility begin and where does it end. I am sure that he will not say that the lunatic, imbecile or idiot, are responsible for their acts, although a great majority of them know when they are doing right and when they are doing wrong. He must know that these creatures act from impulse, being frequently the result of fear and terror. And surely these cases are fit subjects of enquiry for medical men. Surely the diseased mind belongs to the study of the medical man, as much as does the diseased body, more particularly as mind and body are one. The editor of the *Globe* must remember that science enables the medical men of the present age "to administer to a mind diseased," and that it is their duty and privilege to decide when the mind is diseased, when men are responsible and when not for their acts. No man holds a higher respect for the judiciary than I do. I look upon a judge in his judicial capacity, as something sacred, something very far above the vulgar crowd, something very far above that which any medical man can ever attain to. Yet, I don't conceive a judge to be the proper person to diagnose a diseased mind, any more than he is the proper person to diagnose a diseased body, and I conceive it just as absurd to make a law defining what is insanity, as to make a law defining what is consumption. The duty of the judge is, after hearing all the evidence for and against the criminal, with regard to his mental state, to declare whether he is or is not a person responsible for his acts. And I believe in ninety-nine cases out of a hundred, he would adjudicate correctly. And for the best interests of society I hope that this power will always remain in the hands of our judges. It is very much to be regretted that this every day cry of insanity got up in the many criminal cases is bringing science into disrepute, and I fear that the result will be that many responsible criminals will get free, where those that are irresponsi-

ble will suffer from either ignorance or prejudice. I am afraid that judges and juries may possibly mistake insane cunning for intelligence, and boorish stupidity for insanity.

It is no very easy thing at all times to diagnose a case of insanity; at least that has been my experience, and I find it much easier to detect a man playing the fool, than I do to detect a man trying to conceal his insanity. The cunning of such men is something extraordinary. They will carefully watch every word they utter, and every one of their acts, that they may not be found off their guard; and very frequently it is only when by some accidental circumstance we strike the key-note of their delusion or illusion, that we find out that they are insane. Cases of this sort are to be found every day in lunatic asylums, asking for their discharge, declaring themselves perfectly well, and conducting themselves with the greatest propriety, even to render aid to keepers in case of necessity, and yet are these men what the *Globe* would call "mad as March hares," and likely to remain so all their lives. From these facts, I should be very cautious before I would go into a court and declare any criminal sane or insane, and I think when the plea of insanity comes up, for the sake of security, the best thing to do would be to send the criminal to a lunatic asylum, where he would be under the daily observation of the medical attendant, and leave it to him with time and circumstances, to find out whether the man was sane or insane."

Now gentlemen, as I wanted to say so much I thought it best to read an extract from my letter already published. You will have observed that I laid particular stress upon the fact of the difficulty that existed in diagnosing a case of insanity where the person had sufficient cunning to try and conceal it. It is this that most concerns the medical man, for he is much more frequently called upon to examine and pronounce upon the mental state of his private patients than he is to give his opinion on the mental state of criminals, and it would not do to send these cases to a lunatic asylum on mere suspicion. If the criminal is not mad but playing the fool, he is suffering the punishment due to his crime. But it is quite a different affair with a private

patient, there to make a mistake would very probably destroy the character of the medical man, as well as to expose him to an action for damages. It must be always borne in mind that husbands who have got tired of their wives, have accused them of insanity, and had them incarcerated in lunatic asylums, and that wives have done the same with their husbands. Moreover that when children have got tired of supporting their old parents they have placed them in lunatic asylums to get rid of them. These facts should never be forgotten by a medical man when he is called upon to give a certificate of insanity. My advice in these cases would be, that the medical man before seeing the case he is called upon to examine, should first get all the information possible with regard to the accused person's actions, and all their previous habits, and this information should be obtained not only from immediate friends but from neighbors; he should also have the family history, and if possible find out whether there was any hereditary taint. All the information he can obtain he should commit to writing, and examine it well before he goes to examine the patient. Of course if the case is one of a furious maniac, or a monomaniac, or a case of hysterical mania, or even melancholia, there will be but little difficulty in a diagnosis, (mind, I am speaking of a private patient not a criminal), but there is a form of insanity that I have already alluded to that is very difficult to diagnose—cases where much blame is attached to the patients by their friends, though they deserve the greatest pity; they are called persons of violent tempers, who could control their tempers if they wished; they turn very frequently to the use, or rather abuse, of stimulants, then they are called drunkards; in fact every foul epithet is applied against them, till they commit some terrible crime; then, for the first time, it dawns upon the minds of the friends that the person is mad and has been so for many years. Now it is to such a case in its early stage that I wish to draw your particular attention. I said that they are deserving of the greatest pity,—and so they are—although they use all the power and force they possess to *conceal* their insanity, not only from their friends but from themselves. These cases I call chronic mania, due to a slow, chronic inflamma-

tion of the cerebral frontal cells, which in time terminates in disorganization—cases difficult to cure even in the earliest stage, but incurable when disorganization has taken place. These are the cases where you will find the most extraordinary amount of insane cunning, so that you may possibly be deceived and rather consider them persecuted by their friends than mad. These are the cases which strangers meet in lunatic asylums, and ask why such a person is in the asylum? That he told his story very simply and truthfully to them, and they think it a great shame to have him incarcerated in a lunatic asylum. Yet, gentlemen, these insane persons are dangerous to both themselves and others, they are frequently either suicidal or homicidal. And their delusions and illusions are most extraordinary; attributing to those near and dear to them, the very acts that they are guilty of themselves. These lunatics' idea of right is exactly a sane person's idea of wrong.

Let me introduce you to such a case. You are called upon by a gentleman to go and visit his wife. He tells you he does not know what is the matter with her, that her actions are very strange; she that was the most loving wife seems now to actually hate him; she that was the most loving mother now treats her children most cruelly; she that was the neatest of women has now become slovenly, actually dirty in her habits; she that was the most saving of women in her household affairs has now become the most foolishly extravagant. You at once suggest insanity. He does not know what it is; in fact, he does'nt like to think his wife mad, though in truth he has thought so for a long time. You call in the course of the day to see Mrs. B.; you are shown into a sitting-room by a servant; Mrs. B. makes her appearance in a few minutes, as bright as possible; she is delighted to see you, and makes most particular enquiries about your health and about the health of all your family; she is most particular in apologising for being found in her dishabille, and laughs loudly that you should find *her* in such a state, *she* that is always so particular, but then doctors, you know, must not be kept waiting; so she runs on, and in a few minutes will do a fearful amount of talking about nothing. When she comes to

a stop, she watches you keenly to see what brought you there, or what you are going to say ; in fact she knows by a kind of instinct or intuition what you are there for, and wants to throw you off your guard. Then you tell her that her husband requested you to call and see her, as he was afraid she was ill. When making this announcement keep your eyes well fixed upon her, then comes the change ; she will at once assure you that, " thanks be to God," which she emphasises, that she never was better in all her life ; she can eat and sleep well ; she has nothing to trouble her conscience, whatever others may have. She thinks it was Mr. B. himself that required medical treatment, not she ; but she now understands him, he could no longer deceive her, her eyes were open. She would let Mr. B. know he was not to insult her by sending a doctor to see her when she was not sick. At this stage one of two things occurs ; she will either beg to be excused, as she has her household duties to attend to, and will leave you very abruptly, or she will feign to cry and take you into her confidence, asking you to protect her as she is a poor persecuted woman who has been deprived of all her friends by her husband. She will be most particular to bind you to the strictest secrecy not to let her husband know a word she said to you. At this stage you must talk to her very kindly, offering her no opposition, but rather agreeing with all she says, till you get her calmed down. If all her story is false, and she is a poor insane woman suffering from delusion and illusion, you will find the following symptoms : *pupils dilated,* and if not entirely fixed, very sluggish in obeying the stimulus of light, or very often irregular in shape, or one pupil more dilated than the other.

You will find the pulse hard, rapid and variable, averaging about 110 beats a minute, then take her wrists one in each hand, feel the pulse very cautiously, and you will find that the pulsation is not equal in both wrists, but that one follows the other, very rapidly certainly, but still not together.

These are the particular symptoms, gentlemen, that I wish to draw your attention to, as I am not aware that any writer on insanity has pointed out these particular symptoms in this otherwise concealed form of insanity, that is so far as physical symp-

toms are to be found. You may ask how do I account for this anomaly in the pulse? that is just the very question I wish myself to have solved, but I find it as difficult as I do to explain the anomaly of the pupils. Pathology has shown that the disease, in these cases, is in the cells of the cortical portion of the anterior portion of the cerebrum, far removed from the *optic*, or ophthalmic branch of the 5th pair of nerves. Indeed when the base of the brain is attacked we generally find the pupils contracted so small that the point of a fine needle could not pass through them. However, I can only declare to you the fact as I have found it, and console myself with the knowledge that we have many other diseases presenting certain symptoms that we cannot account for. However, I trust the time will come when pathology will throw more light upon the subject.

I wish you to understand that there are other cases of mania in which we find these very anomalies of the pupils and pulse, as well as in the form I have drawn your attention to, but then you have so many other symptoms to guide you in these cases that there is no fear of your making any mistake. For example the violence exhibited in a acute or hysterical mania. But these are the only symptoms that can guide the medical man in chronic mania, arising from irritation or organic disease of the cerebral cells in the anterior portion of the cerebrum.

As I have already stated, it is no uncommon thing to find such insane persons become drunkards, and they are called drunkards who have become insane from drink; such is by no means the case; they drink because they are already insane, and feel the want of stimulants to the brain. Such on error is a very grievous one, for it not only deprives the patients of being put under a proper course of treatment, but deprives them of the sympathy of their friends at the very time that they are the victims of a fearful disease.

I have taken a few cases at random that will be a proof to you that I have founded my remarks upon my own observations.

D. G., æt. 35, admitted December, 1876, a furious maniac. Pupils dilated and fixed; pulse 110. Dec. 5th, pulse 102. Put under treatment December 11th. Pulse 88. Pupils obey the stimulus of light.

G. M., æt. 37, admitted Dec. 4th, 1876, furious maniac. Pulse 128, the same on the 6th; put under treatment. On the 11th, pulse reduced to 100. Pupils obey the stimulus of light.

M. T., æt. 27, admitted December 4th, 1876. Furious maniac. Pupils dilated and fixed; pulse 160; put that day under treatment. On the 6th pulse 108; on the 11th pulse 80; pupils obey the stimulus of light.

I could give you fifty such cases of furious acute mania, but those three will suffice. No one could mistake these cases; no difficulty in diagnosing them. I will give you now a few cases of chronic mania, such as I have been describing to you, where the conduct of the patients *in* the asylum was most exemplary.

M. A., æt. 35, admitted Nov. 28, 1876. Puplis dilated and fixed; pulse 100, and not equal in both wrists. December 2nd pupils in same state; pulse 102, not equal. Put under treatment. December 18. pulse 80, pupils normal.

V. M., æt. 62, admitted November 28th, 1876. Pupils dilated and fixed; pulse 102, not equal. Put under treatment December 14, 1876. Pupils normal; pulse 89 and regular.

B. P., æt. 19, admitted November 28th, 1876. Pupils dilated and fixed; pulse 142, not equal. Put under treatment December 5th; pulse 148. December 18th, pulse 84; pupils normal.

M. S., æt. 37, admitted December 20th, 1876, was not put under treatment nor examined immediately. December 27th, pupils did not obey the stimulus of light; were partially dilated. Pulse 105, and not equal in both wrists. Put under treatment December 29th; pulse 109. Jan. 3rd, 1877; pulse 100; Jan. 9th, down to 90; pupils very sluggish, but in some degree obeyed the stimulus of light.

I could give you, gentlemen, numbers of such cases, but I feel that I have already occupied too much of your time, and should rather apologize to the President and the Society.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Rupture of the Vagina. — Under the care of DR. ROSS. Reported by MR. C. L. COTTON.

L. H., aged 60, was admitted to the wards of the Montreal General Hospital, November 25th, 1876, suffering with severe hæmorrhage from the vagina. She states that her catamenia stopped ten years ago; is the mother of seven children, one of whom only is living. Her husband, whom she had not seen for nine years, and who is seventy years of age, returned yesterday and insisted on having connection with her. To this she objected, but he insisting on it, she at last acceded to his wishes. It caused her a great deal of pain, and immediately after a severe hæmorrhage took place from the vagina. She lost a very large quantity of blood (as she says, it would have filled a bucket), which drenched the bedclothes and ran over the floor. In attempting to get up and walk she fainted. She was found and brought to the Hospital. Her husband had decamped. She continued to lose blood for the next twenty-four hours—both clots and fluid blood.

Vaginal Examination.—Vagina somewhat contracted and shortened; scarcely any cervix uteri. A rent about one inch long is seen just behind the cervix, in the upper part of the vagina. It does not appear to have opened into the peritoneal cavity.

She had chills and flushings all night. Ordered injections of warm water with a little carbolic acid and suppositories containing grs. ij. opium.

November 26th.—No blood lost since yesterday. Passed a good night. Complains of some pain in the back to-day. Temp. normal. Pulse, 76; full and strong. She has had no vomiting. She declares that her fæces came through the vagina; but this is very doubtful. No pain over the abdomen.

November 28th.—A slight pain in the right hip. No pain in the back. Slept well. Feels very comfortable.

November 29th.—Had a dose of ol. ricini last night, which operated very freely. Tongue clean; appetite good.

November 30th.—Left the Hospital, apparently well. No vaginal examination was made.

Reviews and Notices of Books.

Annual Report on Diseases of the Chest.—Under the direction of HORACE DOBELL, M.D., &c., &c., Consulting Physician to the Royal Hospital for Diseases of the Chest. Assisted by numerous and distinguished coadjutors in different parts of the world. Vol. II. June 1st, 1875 to June 1st, 1876.

We have just received the above work which appears punctually according to the plan proposed by Dr. Dobell. In our review last year of the first volume of this series, we took occasion to express our appreciation of the efforts of the author to reduce to convenient form all the valuable material on chest diseases which is found scattered through the medical journals of all quarters of the globe. We need not here repeat what we then said. It may only be remarked that our opinion then formed of the usefulness of the work is still further confirmed by a perusal of this second volume. In most of the compendia or retrospects of medicine which appear annually, the scope is extended over all the branches of medical, surgical, and obstetrical science, and consequently all the matter must of necessity be presented in an extremely condensed form. Here, however, it is very different. One particular section alone of medical science being worked up, it is quite possible for the writers to expatiate much more fully when they think the importance of the subject sufficiently demands it; and there is room, often, for full reports of cases which will be found of very great interest. The great benefit of these reports to any progressive practitioner is this: he meets with a case we will say of some chest disease, of a serious nature, and to which attention is constantly directed, and the modes of management of which are,under varying circum-

stances, being very frequently modified and improved upon: he desires to consult the most recent and most skilled opinions on the special subject with reference to various points in the treatment. He has only to turn to the index of Dr. Dobell's reports and he will find at once references to those parts which furnish him with exactly the information required—information which really could not have been obtained in any other way, or at any-rate, not without access to a very large library, and an almost impossible amount of research.

Of course the greater share of the volume is devoted to the report from Great Britain and Ireland, but ample room is at the same time afforded for those from all the Continental, American, and Colonial countries. It is pleasing to find that the report from our own country (which is given in a prominent place) proves to be unusually interesting. It has been compiled by Professor Osler of McGill College, and includes the reports of several cases of empyema variously treated, cases of cirrhosis of the lung, acute fibrinous bronchitis, successful tracheotomy in croup, and several others. It also publishes in extenso, from this Journal, the observations made by Dr. Osler upon the Pathology of Miner's Anthracosis.

We recommend all our readers to subscribe for this very useful annual.

The Principles of Human Physiology.—By W. B. Carpenter, M.D., F.R.S. Edited by Henry Power, M.B., London. A new American from the eighth English Edition. Edited by Francis J. Smith, M.D. Large 8vo. pp. 1083.—Philadelphia: Henry C. Lea, 1876.

The last edition of this work, under the able editorship of Mr. Power, has been brought well up to the time, and we find all the most importannt of recent physiological facts embodied in it. As a comprehensive and trust-worthy exposition of physiology, it has stood for many years unequalled, and needs no further commendation from a reviewer.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

A New Remedy, called Digestine.—(By A. F. SHELLY, M.D., of Philadelphia.) — This is obtained from the gizzard of the domestic fowl (chicken), and is a specific for vomiting in pregnancy. I have used this remedy for twenty-five years, and it has never failed. It is also the most powerful and reliable remedy for the cure of indigestion (dyspepsia), and sick stomach caused from debility of that organ. It is useful in all cases where the pepsines and pancreatines are used, but with much more certainty of its good results, for it puts all those preparations, in my experience, in the background.

In complicated affections of the stomach, such as inflammation, gastralgia, pyrosis, etc., it may be combined with subnitrate of bismuth and opiates; and in diarrhœa and cholera infantum, with astringents, both vegetable and mineral. I have given the article to several prominent physicians, who have used it with the happiest results, among whom I may mention Professor E. Wallace, of the Jefferson Medical College; he gives me the result of seventeen cases as follows:—

In vomiting of pregnancy, out of nine cases he cured six, and palliated two, and in one case the remedy was not taken according to direction, and therefore had no effect.

He used it in seven cases of sick stomach caused by chronic inflammation of the uterus; cured five, and two remained doubtful. He also used it in a case of very obstinate sick stomach, caused by an irreducible hernia, and says this was the only remedy that gave any relief.

We, who have some experience, all know that vomiting of pregnancy is a sore affliction, and in some cases almost unendurable, nay, indeed, putting life in jeopardy; but in digestine we have a remedy which will prove to be a great blessing to mothers, who, as yet, think vomiting must be endured as a natural consequence.

If I am able, by this publication, to induce the medical fraternity to make use of the remedy, I am positive that a great boon will be conferred upon a class of sufferers who claim our sympathy.

The dose is from five to ten grains, hardly ever more than five, except in obstinate cases. For children, from one to five grains. My mode of administering it is in a spoonful of water or tea, or it may be strewn on a piece of bread and covered over with a little butter; it is, however, nearly tasteless. In dyspepsia and in vomiting of pregnancy, I direct it to be taken half an hour or so before each meal. In other affections of the stomach and bowels, every two to four hours. I give it uncombined, except in complicated cases, as heretofore mentioned.

The methods by which this principle can be obtained from the viscus are various. When I commenced to employ it, I used it in rather a crude state, by pulverizing the lining membrane of the gizzard; but it requires too much care and precision in the drying and cleansing operation, in order not to destroy its virtues. There is also great inconvenience in obtaining the viscus during the heat of summer and extreme cold of winter, as temperature is one of the main things to be observed, in order to preserve its efficacy, purity and sweetness. Later, finding this mode of preparation unsatisfactory, and inconvenient for the above reasons, I consulted with Wm. R. Warner & Co., 1228 Market street, Philadelphia, who have prepared a form, designated digestine; its purity, and also its good effects, I can vouch for.—*Medical and Surgical Reporter.*

Giant-Cells in Syphilis.—An interesting communication on this subject is made in the *Centralblatt für die Medicinischen Wissenschaften*, No. 45, 1876. As the matter is now being discussed at the Pathological Society, we shall briefly give the substance of the communication. Dr. Paul Baumgarten, the prosector at the Pathological Institute in Königsberg, describes the presence of "giant-cells" in syphilomata. These cells have hitherto been looked upon as the

specific histological criterion of tubercle. They occur, however, in a number of other growths, but, as Dr. Baumgarten says, their presence or absence has often been invoked to decide on the syphilitic or tubercular nature of products, the microscopic characters of which were rather undecided. In one case, Dr. Baumgarten relates how a diagnosis of syphilis was almost withdrawn because of the presence of these giant-cells in a cerebral neoplasm, though the clinical history, as well as the remaining post-mortem appearances, pointed very definitely to syphilis. On another occasion, while examining a syphilitic testis in the fresh state, he found large numbers of these remarkable cells, counting as many as twelve or sixteen of them in the field of a No. 4 Hartnack's objective. In this latter case the history pointed definitely to syphilis. Urged on by these observations, Dr. Baumgarten examined other syphilitic growths, and found them almost constantly. Of course these results are of great importance, and we hope that there will be observations bearing on a point which is interesting and important to the elucidation not only of syphilis, but also of tubercle.—*Medical Times and Gazette.*

Treatment of Catarrh of the Bladder.—Prof. Edlefsen says of late the view prevails more and more that in comparatively recent cases of catarrh of the bladder, the introduction of water or medicated fluids into it by means of the urethra is the best method of treatment. He has tried this method repeatedly and found no benefit from it in recent cases. After speaking of the excessive sensitiveness of the bladder, and the danger of introducing any substances into it—in favor of which view he quotes Hegar—he goes on to say that the treatment of the bladder had much better be conducted through the blood, and believes that lukewarm water injected into the bladder is injurious, and that the mechanical irritation of a catheter is most hurtful, and even if Zeissls' method of introducing fluid into the bladder, without using a catheter, be employed, that still the objection remains of the irritating

quality of the injected fluids. He is much pleased with the remarks of Dr. Carl Pauli (Prof. Dittel's assistant in Vienna), who says that one should never, unless absolutely obliged, introduce an instrument into the bladder in cystitis, and Lebert, who says the irritation produced by the instrument does more harm than the good produced by the introduced fluid. Prof. Edlefsen introduces his new remedy, which is administered internally, a remedy of which he has had large experience in the treatment of catarrh of the bladder with most favorable results, and without the production of evil results to the general system or any single organ ; that if injections *must* be used, it forms the best. This remedy is chlorate of potash.

Prof. Edlefsen says that medical men are not content with the present remedies for catarrh of the bladder, and that when Schütz, Lebert and Pauli speak of the difficulty of causing long-standing catarrh of the bladder to disappear even when most properly treated, and ask why numbers of practitioners are discontented with remedies which satisfy Bartels and his school, he thinks it is due to a wrong impression of the proper remedies to be used and a timidity in using them. The most efficacious remedies (next to free water-drinking and dieting), are, according to Prof. Bartels, oil of turpentine and balsam of copaiva Dr. Pauli and Prof. Dittel, of Vienna, say that oil of turpentine, matico, balsam of copaiva and cantharides, taken internally, cause such irritation of the kidneys, that nephritis may be produced, and that these remedies require no special notice. Prof. Edlefsen does not wonder at the poor success of Dr. Schütz in curing long-standing bladder catarrh when he says he has no experience of ol. terebinth, balsam copaiva or tannin in its treatment. That Seitz, in his last edition of Niemeyer's work, recommends these remedies to be tried, and that Felix Von Niemeyer himself, in the earlier editions, recommended them warmly for the treatment of the later stages of acute catarrh of the bladder. Kunze recommends them where tannic acid fails. Nothnagel and Husemann merely mention them in their text-books. Prof. Edlefsen says he has patients coming to him from all parts of

Germany, who have been treated by numbers of physicians, but never with copaiva or oil of turpentine ; he remarks that there are few cases of catarrh of the bladder which can resist the above-named remedies properly administered, and that the greater portion of these are incurable (tubercle or cancer), that the above remedies are not only useful in catarrh of long standing, but also in recent cases. In gonorrhœal catarrh of the bladder, he has used copaiva and turpentine with best effects. * * * * * Normal urine is acid, and an alkaline reaction of the urine is disadvantageous, as has been proved often ; the reëstablishment of acid urine in catarrh is a sign of a return of the bladder to its normal condition, and oil of turpentine acts very speedily in bringing about an acid reaction of the urine. It does not do this because it is acid itself, but by lessening the inflammation, perhaps by contracting the bloodvessels, as this remedy acts in the same way on other mucous membranes affected by catarrh ; so oil of turpentine causes acid urine by improving the condition of the bladder, and the acid urine thus produced still further improves the condition of the bladder. Prof. Edlefsen says that if an acid reaction of the urine is of such great importance, how is it that alkaline mineral waters used for a long time have so good an effect in catarrh of the bladder, that they act chiefly by filling and distending the bladder, and thus frequently washing it out. Dr. Pauli's objection that oil of turpentine causes nephritis has little weight when we consider the numberless cases of pneumonia, chronic bronchitis, putrid bronchitis and even catarrh of the bladder, which are daily treated by the same doses of turpentine (m x.) without producing any such ill effects as nephritis, cystitis, pyelitis hæmorrhagica, &c. Still Prof, Edlefsen admits that he has seen one case among the many hundreds treated by him where turpentine caused strangury and bloody urine—these disappeared on the stoppage of the medicine ; but he thinks there is no reason why we should not use turpentine in catarrh of the bladder, as well as in the various lung affections specified above. Cases, however, sometimes are met with which cannot be treated with balsam

of copaiva or oil of turpentine, viz, : those suffering from catarrh or ulcer of the stomach, nephritis, &c., and in these cases some other remedy must be employed to bring about the wished-for result. Prof. Edlefsen says there are certainly other well-known remedies which are not in the least dangerous, as tannic acid, uva ursi, bucco, matico, &c., and he has no doubt that these remedies, in many cases of catarrh of the bladder, have a beneficial effect, and he has seen the infusion of the leaves of uva ursi often act well in mild cases of bladder catarrh, but as a sure remedy he cannot recommend it, and thinks it causes gastric catarrh and constipation. Salicylic acid, according to Fürbringer, taken internally, checks the ammoniacal condition of the urine, but has no property of preventing the formation of pus, and the same may be said of benzoic acid, which Gosselin and Robin recommend. Dr. Edlefsen thinks that a new remedy, really acting beneficially, will be very welcome to the profession, and says he has found such a remedy in chlorate of potash. He says : " After prolonged trial, and with full conviction, I think this remedy (as I shall show) is a rational one, and never produces bad effects, is not at all dangerous, and has already been used in a number of cases with success, especially in cases where the use of turpentine has been contraindicated ; indeed I have cured cases of catarrh of the bladder by chlorate of potash in a much shorter time than by any other remedy in cases which have withstood oil of turpentine and other remedies." He goes on to say that it is well known that when chloric acid salts are taken internally they reach the bladder, and that when chlorate of potash is taken, chloric acid can be proved to exist in the bladder by well-known tests, as the indigo test. He gives the method of testing for chloric acid in detail. Prof. Edlefsen says it is well-known that chlorate of potash has a specific effect on the mucous membrane of the mouth and pharynx in catarrh, causing it quickly to disappear, and fresh shallow ulceration to heal ; he argues that if such a good effect is produced on these mucous membranes, why not on that of the bladder. * * * * * Buchheim says that in large doses

chlorate of potash has the same effect as saltpetre, causing not only an irritation of the mucous membrane of the bladder but inflammation of the bladder and bloody urine. Isambert says it causes pain and uneasiness in the region of the kidneys, in 20 gramm. doses, and lessens the amount of urine, but Prof. Edlefsen says, as many physicians can testify, he has employed it in quite as large doses where stomatitis and angina existed as in catarrh of the bladder, without there being the slightest of an unfavorable symptom, and pronounces the remedy perfectly harmless. But such large doses, he says, as Isambert uses, are not necessary in the treatment of catarrh of the bladder, and he orders usually: potass-chlor, 15.0; aquæ dest, 300.0 (℥s potass chlorat to oj water) of this he gives a tablespoonful every two or three hours. He says some people object to the taste of chlorate of potash, in such cases he adds a little aqua laurocer. to the solution. He says syrups must never be added. Prof. Edlefsen first employed chlorate of potash in cases where turpentine failed or was contraindicated, and was surprised at the rapid cures effected. One case which had lasted two years, and in which turpentine did no good, after employing potass-chlor, for eight days there was hardly any sediment in the urine, and it was quite acid. On the other other hand some cases which did not improve under potass. chlor, were cured by oil of turpentine. He thinks this remedy will supply a space long vacant, and hopes practitioners will fully test it. When chlorate of potash is used, as a rule the pus in the urine rapidly diminishes, the subjective symptoms disappear, or are mitigated, and the acid reaction of the urine returns, but not so rapidly as after the employment of oil of turpentine. The employment of chlorate of potash in diseases of the bladder is not altogether new. F. W. Müller mentions this remedy as an injection for gonorrhœa in proportion of 1 part of chlorate of potash to 100 of water, and a colleague of Prof. Edlefsen's has employed it for several years in cases of gonorrhœa accompanied by stricture. Prof. Edlefsen has never used this remedy in catarrh of the bladder due to gonorrhœa, because in these cases he always uses balsam of

copaiva. In conclusion, he says he never combines narcotics with this remedy, because it always acts promptly in relieving the subjective symptoms. He advises plenty of water to be drunk whilst this remedy is being taken, and also a strict attention to diet. Then follows a series of 16 cases of catarrh of the bladder, in which the treatment has been by chlorate of potash, which want of space, unfortunately, does not permit us to give.—*Condensed from Deutsch. Archiv. f. Klin. Med. Bd.* xix. *Hft* 1. *Dec.* 18, 1876.

Diphtheria.—Schultz (*Allg. Med. Central. Zeitung.* 14, 1876,) treated two cases of scarlatina and twelve of primary diphtheria by carefully pencilling the affected spots two or three times a day, with pure salicylic acid. The application causes only moderate burning, and does not interfere with the administration of nourishment.

In addition the following mixture was used, a teaspoonful every hour: acid salicyl. 7, aq. dist. 120; mucil. gum. arab., syrup, aa—15. In ten cases the process was concluded by the fifth day. The general condition good, and the appetite had returned.

Henoch, Professor of Children's Diseases in Berlin, (*Charite-Annalen*, Bd. I), makes the following observation on this disease:

As a cause of unexpected death during convalescence, fatty degeneration of the heart has been found in many cases. The same change has also been discovered in an early stage of the disease when death has occurred from the collapse. Microscopic examination of the heart fibre is necessary in these cases, as the colour is often retained on account of the quantity of blood in the muscles. Endocarditis, lately described by Bouchut as an almost constant complication of diphtheria, was not observed in any case.

The known fact that the so-called diphtheritic exudation only infiltrates the tissues above the vocal cords, while below it occurs as a croupous membrane, was contradicted in some cases.

In one instance a whitish-yellow infiltration of the mucous membrane was found in the lower part of the trachea and the right bronchus, which, after removal, left a loss of substance.

In two cases nephritis was noticed as a sequela.

The following case presented a peculiar pulse phenomenon in the course of the disease: A girl seven years old was admitted on the 25th of February with ang. diphtheria and commencing obstruction in the larynx. Pulse now and then irregular. The following day tracheotomy was performed. Pulse small and irregular, 80–86 in the minute. Nourishment passed through the glottis, and escaped through the tracheal wound. From 1st to 3rd of March the following was observed in the pulse: After two rapidly following pulsations, of which the second was weaker and smaller than the first, a long pause supervened. The phenomenon was unaffected by the respiration. The two pulsations corresponded to four heart sounds, *i.e.*, two perfect heart contractions and dilatations. On the 4th the pulse was regular. On the 5th the child died. At the post mortem, nephritis and fatty degeneration of the heart were found; no abnormalities about the vagi. This phenomenon was first described by Traube, as P. alternans.

Diphtheritic paralysis was successfully treated by injections of strychnia.

In Neureuter's and Salmon's report of the Franz-Joseph Children's Hospital of Prague, a case of ulcer of the œsophagus from diphtheria is recorded: The girl 6 years old, was taken in with scarlatina and diphtheritic pharyngitis, death occurring on the ninth day, with symptoms of brain pressure. At the post mortem a circular loss of substance, which had hardly penetrated the muscular coat, was found in the lower third of the œsophagus. The child had died from hæmorrhage caused by the separation of the diphtheritic membrane. Neither difficulty in swallowing nor bloody stools were noticed during life.—*Jahrbücher, f. Kinderheilkunde, Bd.* x. *Hft.* 3 and 4.

CANADA

Medical and Surgical Journal.

MONTREAL, MARCH, 1877.

SANITARY STATISTICS.

The annual motion of the member for Grenville, Dr. Brouse, has been made before the House of Commons—"for a select committee on the subject of vital statistics and public health." On this occasion we did not observe that he specially selected the city of Montreal as an illustration of an unhealthy place, to bear out his arguments, nor did we observe that he was twitted by the Honorable the Premier (as occurred last year) "for being desirous to lay his views before the public, but that he could scarcely hope to accomplish anything by his motion." The motion was,however put and a select committee named. Dr. Brouse's views were ably seconded by the Hon. Dr. Tupper, who is reported to have said that—

"He concurred in the remarks of the member for Grenville; he held that questions of vital statistics was vested solely in the Dominion Parliament, and the provinces that took up the subject did so unconstitutionally. He referred to the times before Confederation, when the Provinces had their own statistical departments. Referring to the case of Nova Scotia, he said that till recently the Province of Nova Scotia had had its own department, but for the first time he noticed that the estimate for it had been left out this year. He blamed the late Government and the present one, for not having before this, taken action, and hoped that at once some decisive action would be taken."

"Hon. Mr. MACKENZIE believed the member for Cumberland was wrong in what he said as to the constitutionaliy of the matter. He was extremely anxious to do what was possible in this matter, and the Government would be glad to consider whatever the committee might suggest in regard to this important matter."

This, certainly, is a very hopeful position of the question at issue. We have before on several occasions expressed our conviction, openly in the columns of this periodical, that we believe that there existed an urgent necessity of a general law for the Dominion, an act passed by the Dominion House of Commons, as it appears to us perfectly plain, that if each province enacted a law of its own touching the subject of vital statistics, and the method of collecting them, nothing like uniformity would exist, and hence the information gathered would be unreliable. To Dr. Brouse credit is due for his continued action in connection with this subject, and we may hope for some definite results, now that the Premier has announced "that the Government would be glad to consider whatever the committee might suggest."

But although decency prevented the motion by Dr. Brouse from being shelved, as it was in reality last session, yet we fear there is not much to be expected, as the acceptance of the motion by the Premier, and his subsequent remarks thereon, are very guarded. He says the Government "would be glad to consider whatever the Committee might suggest." This is not a bold and straightforward declaration—that the Government were prepared to grapple with the question of sanitary reform, and legislate thereon for the good of the whole country, but then politicians are exceedingly wary and guarded in their utterances.

The questions involved in sanitary legislation are clearly not entirely of local interest. The great benefit to be derived by a general law for statistical enquiry is the uniformity and regularity of the reports that would be submitted, so that it would be open to every man to ascertain the healthfulnesss or otherwise of any locality. Furthermore the Gevernment of the country would be in a position to point out by comparison the insalubrious parts of the country, and the causes of that want of sanitaion. We hold that the Government of every country should occupy that position. But the application of the remedy should devolve on local authorities. If in any particular locality, any city or town, an insalubrious condition existed, and that it resulted in a marked augmentation of the death rate from any special form of disease, the General Government of the country

should be in a position to be able to indicate the fact; but the remedy and its application is then clearly a matter for municipal legislation.

Dr. Brouse has gone into the cost of all the sickness and death entailed on this country through neglect. These are at once curious, but, we presume, reliable statements. The Doctor states that Canada suffers an annual death rate of 100,000. This is considerably in excess of the published statements, and appears high, as it would yield an annual mortality of 25 per 1000 all over the country, computing the population at four millions. From the observations we have ourselves instituted, taking as a basis the census reports, the death rate in country parts is very considerably less than a third of this amount. But we must observe that if Dr. Brouse has made an error in his calculations, he is in every way excusable, as the material he has to work on is very meagre.

One very important point is gained, the committee is struck, and we will look with deep interest at the work it proposes to perform. We are not aware that any definite line of action has been decided on. We are unable to state whether a bill has beeen prepared. This we should suppose should be the initial step. It might at first be defective, but would admit of amendment and ultimately a good and useful measure might be obtained.

DEATH OF SIR WILLIAM FERGUSSON, BART., F.R.S., L.L.D., Serjeant-Surgeon to Her Majesty the Queen.

By the English papers just received we notice the death of this distinguished surgeon, which event took place on Saturday 10th February, ult: William Fergusson was born at Preston Pans in East Lothian, on the 20th March, 1808. His father, Mr. James Fergusson, was in the excise. The subject of this notice was early in life transferred to his uncle's charge, who placed him at the High School of Edinburgh, and subsequently he entered the University. At the age of 15 years he was placed in a lawyers' office. This was in the days when

Robert Knox had so popularized the study of Anatomy, that a large number of young men in the Scottish capital had entered into that study with very great enthusiasm. Fergusson with others having attended some of Knox's lectures became fascinated, and exchanged the goose-quill for the scalpel. He was a lad of about 18 years, and after pursuing his studies, for a little over two years, he received the license of the Royal College of Surgeons of Edinburgh, and the year following the Fellowship by examination. On reference to the Medical Register it will be seen that he became a Licentiate of the College in 1828, and a Fellow in 1829. Fergusson was an apt pupil, and a favorite of the great Anatomist, Robert Knox, he soon gave evidence of manual dexterity in the dissecting room, and made himself so generally useful to his teacher that he became his assistant, or senior demonstrator to his class. He occupied that position at the time when the unfortunate events of the murderers Burke and Hare so aroused popular clamour as to force Robert Knox to leave Scotland.

Mr. Fergusson commenced in 1830 or 31 a course of special demonstrations in surgical antomy which were highly appreciated by the students of that day. This gave him a name as a man of rising ability, who only lacked opportunity to develop his talents. He was elected Surgeon to the Edinburgh Royal Dispensary towards the end of 1831, where he had an opportunity to display his surgical skill. Shortly after his appointment he ligatured the subclavian artery, an operation that had only been performed twice previously in Scotland. He was elected Surgeon to the Royal Infirmary of Edinburgh, about the year 1835 or 36, after Liston left the Northern capital for the Metropolis, and he began to divide the surgical practice of Scotland with James Syme, already at the zenith of his career. Towards the end of the year, 1839, the professional chairs of Medicine and Surgery at King's College, London, filled by Dr. Watson, and Mr. Arnott were vacated by the resignation of those gentlemen. In consequence of the establishment of a new Hospital directly in connection with King's College, which was deemed necessary for the continued success of the School,

those gentlemen were expected by their colleagues to become officers of the new establishment, or to resign their respective chairs, as they were both attached to Middlesex Hospital. They preferred to resign their connection with King's College than to surrender their appointments at the Middlesex Hospital. This action which was steadily persisted in, although much regretted, resulted in the election of Dr. Budd to the chair of Medicine, and Mr. Fergusson to that of Surgery. This took place in the early part of the year 1840, and Mr. Fergusson resigned his appointments in Edinburgh, and removed to the English capital. Although the professorship at King's College gave him position, yet he had formidable English rivals to contend with in the persons of Robert Liston, Astley Cooper, and Benjamin Brodie, and many others. He began his career in London, without the advantages of family or other connections of high standing. In 1840 he became a member of the Royal College of Surgeons of England; and in 1844 was elected an honorary Fellow. He was appointed Surgeon in ordinary to H. R. H. Prince Albert in 1849, shortly after the death of Mr. Aston Key; in 1855 Surgeon Extraordinary to the Queen; in 1866, he was created a baronet of the United Kingdom, and the year following Serjeant Surgeon to Her Majesty on the death of Sir William Lawrence.

Sir William Fergusson was a clear and lucid writer. One of his earliest contributions on the subject of Lithotrity appeared in the *Edinburgh Medical and Surgical Journal* for October, 1838. It was copied from that journal into the columns of the *British and Forign Medical Review*, and the editors in introducing the article remarked "This is a sensible paper, and is well deserving the attention of practical surgeons." We well remember at the outset of our professional studies the satisfaction experienced in becoming possessed of a copy of Fergusson's System of Practical Surgery. This work appeared towards the end of the year 1842, and has since run through six editions. Its first appearance received laudatory comment from the reviewer.

But although Sir William Fergusson was fully engaged at his

College and Hospital duties, besides conducting an extensive surgical practice, yet his industry was such that he could find time to follow up important observations, more especially in the way of conservatism in surgery, and to publish those observations. No man could wield his knife better than Fergusson, but he was fully impressed with the belief that the knife was the scandal and approbrium of his art. His common sense was such that it led him to be careful in the adoption of novelties in surgical practice; he worked for the benefit of his fellow man, and employed his surgical resources in the alleviation of suffering, at the least sacrifice of health or limb. His contributions on cleft palate were markedly original, and his suggestions were favourably received, and generally adopted by practical surgeons. His observations on excision of the shoulder and knee-joints were at once pronounced and decisive, and his views have done more than the writings of any other surgeon to lead to the adoption of those operations in suitable cases. Let any person refer to the *Lancet* for June 9th, and 16th 1864, and he will there find a masterly article from the pen of Fergusson on the subject of excision of the knee, in which he compares that operation with amputation. The argument throughout is sprightly and convincing.

After giving a general history of the first attempts on the part of surgeons to save limbs by the operation of excision, he remarks:—"Often and often had I myself felt deeply grieved to see a well-made foot totally free from disease, and a leg on which the pathologist would scarcely glance, swept away by amputation in the thigh for disease in the knee." Thus we observe how keenly he felt it to be the duty of the surgeon, as far as possible, to preserve, not to cut off limbs. And in following out this role, he exhibited patience and unwearied labour in attempts to save a limb—refraining from all operative interference until hope of saving a limb was past. Then would be seen his honest kindliness and delicacy of touch, with unusual skill, in the performance of an operation. All these admirable features of a great man and a great surgeon were possessed by William Fergusson in an eminent degree, and which led to success in life and to fame and fortune, and which brought him peace at the last.

CANADA

MEDICAL & SURGICAL JOURNAL

Original Communications.

CANCER OF THE LIVER;

GALL STONES; OBSTRUCTION OF THE COMMON BILE DUCT; ENLARGEMENT OF THE GALL-BLADDER; ATTACHMENT OF THE GALL-BLADDER TO THE PELVIC PERITONEUM; RUPTURE OF THE ATTACHMENT; HÆMORRHAGE INTO THE GALL-BLADDER AND PERITONEUM; PERITONITIS—DEATH.

By John Bell, A.M., M.D.

Read before the Medico-Chirurgical Society, Montreal, March 30th, 1877.

Mrs. T., the subject of the pathological conditions, whose history I shall briefly describe died on the 12th March, 1877. She was then 58 years of age. Until the commencement of the illness which ended in her death, she had always been remarkably healthy. She was married when 25 years of age and had six children in nine years, when her husband died, and she remained a widow since. One of the children died in infancy, and the remaining five are all strong and healthy. Her hair was grey, and the children have a tendency for the hair to turn grey early. They are all of highly nervous temperament. Until the time of her last illness she never required medical assistance, except at the birth of her children.

About fourteen years ago she first felt a tumour in the right inguinal region. About that time a lady in Brantford had had an ovarian tumour successfully removed. This determined her to consult Dr. Henwood of that place, about the tumour she had found in her own person. Dr. Henwood pronounced the tumour

to be ovarian, and said that the only remedy was the knife, but that she was not to let any one interfere with it, until she could suffer it no longer. At that time it caused her no inconvenience, and she dismissed the matter from her mind until last August. Her health had not been so good as usual, and she was suffering from pains in the back and side, the right, if I recollect correctly. She complained very little at any time, but she seemed to be more or less distressed. Her complexion was rather pale and somewhat sallow.

She mentioned the existence of the tumour to me, and on examination externally and per vaginam, I found the tumour to be very much as she described it. It was about the size of a hen's egg, quite movable, firm and symmetrical, and apparently connected with the right side of the uterus. I considered it to be a fibroid or fibro-cystic tumour of the right ovary, and advised her still to follow Dr. Henwood's instructions. For her general condition I prescribed the citrate of quinine and iron. The position of the tumour was about the brim of the pelvis. The tissues about the vagina uterus and rectum were in a healthy condition. Her health must have improved from the treatment, for I heard little or nothing about the pains until the 19th of December last. Her health was then not so robust as usual, and she was suffering severely from pains in the back and principally in the left side above and about the middle of the crest of the ilium. She was not able to go about so much as formerly but remained lying down a considerable part of the time. Her general appearance was very much the same as usual. Various liniments and plasters were used to endeavor to alleviate the pain, but nothing proved effectual excepting hypodermic injections of morphia.

About the 25th December, Mrs. T. became jaundiced, the colour deepening in a few days to a dark gamboge-yellow, and she complained of uneasiness and pain increasing in severity and persistence in her right side and epigastrium.

After most careful and repeated examinations by percussion and palpation the area of the liver was found to be not larger than usual, indeed rather smaller ; the breadth of hepatic dul-

ness was about three inches, and the edge of the liver seemed to correspond with the edge of the costal cartilages, as a tubular note was elicited on percussing below them, and no free edge of the liver could be discovered lower down or rounded outline of a distended gall bladder. The tumour which formerly had occupied the lower right side of the abdominal cavity, had lately increased, symmetrically, so much in size as now to reach the lower surface of the liver; and when she was lying down, the dulness on percussion was continuous from the liver to the tumour. A tubular note could still be elicited from what seemed to be the transverse colon overlapped by the upper end of the tumour and the lower border of the liver.

The fæces now became white like mortar, and the urine of a dark brownish-yellow colour. These excretions had hitherto always been quite normal.

As Mrs. T. had recently removed to a large new house, which was somewhat irregularly warmed, and as her appetite and general health were poor, I thought, in all probability, she had "caught cold," and the case was one of catarrhal jaundice. A careful diet was therefore enjoined; poultices, hot turpentine stupes, blisters, etc., were applied around and over the liver; and various alkaline and acid medicines were administered, but without any effect in relieving the symptoms. I might remark that my patient had the strongest aversion to taking medicine of any kind, and it was only by great persuasion I could get her to persevere with any remedy for a short time. Her bowels moved regularly every day, and continued to do so throughout her illness. She began to be more restless and uneasy, especially at night—sleeping only for short periods at a time. The pain was always worse at night, becoming perfectly excruciating during the last few nights of her existence. Her strong dislike to taking medicine prevented her using as freely as she ought the chloral draughts I prescribed for her. Her skin became very itchy all over, but this was entirely relieved by sponging the surface with a weak solution of carbolic acid in water.

By the 3rd February the tumour had increased to about seven inches in length and nearly as much in apparent breadth, and I

thought might press strongly against the lower surface of the liver. The tumour was still symmetrical in form. A ridge, however, could be felt extending horizontally across it at the level of the umbilicus; this had been perceptible, but less distinctly, for more than a month. Simpson's uterine sound could be introduced into the cavity of the uterus in a retroverted direction for only two inches. Moving of the tumour did not seem to alter much the direction of the sound. On examining *per rectum*, the tumour did not seem to encroach on the region of that bowel. In front, the tumour could be traced distinctly narrowing down to a neck or pedicle underneath ths arche of the pubes, and was attached to the right antero-lateral surface of the uterus, or lower part of the broad ligament.

I now began to think that this hard foreign body pressing against the lower surface of the liver might be the cause of the jaundice and of its persistence, either by producing irritation and swelling or by direct pressure or by adhesions formed and put upon the stretch causing compression of the common bile duct. On reconsideration, however, it was deemed improbable, as jaundice seldom occurs in pregnant females, and the absence of bile from the stools would not have been so complete and continuous. The possibility of the tumour being cancerous, and the jaundice due to secondary growths had occurrod to me, but the idea was dismissed as seemingly not supported by the facts of the case.

About the middle of February, what seemed to be the enlarged or displaced left lobe of the liver could be felt extending two or three inches below the left costal cartilages, the tumour became irregular in outline, and some small tuberosities could be felt between it and the edge of the liver, in the median line. While manipulating the masses in this region I thought I several times perceived a soft crackling, which it occurred to me might be caused by gall stones striking against one another.

During all this time my patient had continued to become more and more emaciated, her appetite failed, the color of the skin continued dark yellow (as yellow as a duck's foot, as she laughingly remarked,) the urine brownish yellow and the fœces

light grayish white. For about a week she had had a small attack of diarrhœa, which was ended by the passage for two days of bilious stools.

On the 3rd of March I again carefully examined the lower part of the tumour, with a view to decide in my own mind as to the propriety of that *dernier resort*—its extirpation, which seemed alone to be left to give the patient a chance of life. I thought I felt fluctuation in the lower part of the tumour, and as I was continuing to press it intermittently it suddenly gave way, producing an impression that might be conveyed by the bursting a tough wet paper bag full of water or air. The inguinal region, which had previously been filled by the hard and well-defined outline of the tumour, was now soft and flaccid. I thought I had ruptured a cyst in the tumour, as the hard main part of the growth could still be felt in the upper part of the abdominal cavity. No pain was experienced for about twenty minutes, when it began with considerable severity, but was at once completely removed by a hypodermic injection of one-third of a grain of morphia sulph. No great pain pain followed, but there was slight pain or tenderness over the whole belly. On making slight examination the next day (4th March), I found the lower point of the tumour had returned to its old form or place, which I presumed to be due to the refilling of the cyst it had ruptured.

During the whole of her illness up to this circumstance the pulse and temperature continued at or below the normal standard, since then the temperature has been about 101°, and the pulse a few beats over 100 per minute.

On the 19th March, inst., Drs. G. W. Campbell and R. P. Howard met me in consultation over the case and finding the conditions such as I have stated, decidedly advised no interference, as there was a strong probability of cancerous disease implicating the liver. No operation was attempted. The patient died in three days afterwards.

AUTOPSY 30 HOURS AFTER DEATH BY DR. OSLER.

Body, that of a well-made, but spare woman. Skin intensely jaundiced; conjunctivæ yellow. Rigor mortis absent.

Abdomen.—On opening this cavity a few ounces of slightly turbid, and sanguineous fluid were removed. The liver is seen to be somewhat enlarged, and extends fully 3½ inches below the margin of the ribs. Projecting from the under surface of the right lobe is an enormously distended gall-bladder which reaches within two inches of the pubis. The upper surface is free, but to the left side it is attached by loose and somewhat fresh adhesions to the pushed up omentum and stomach. The apex, which is rounded, presents an irregular surface, as if it had been attached, and on the side of the broad ligament, at a point a little to the right of the uterus is a round space, covered on the surface with decolorized fibrin, hæmorrhagic below, which looks very much as if here the gall-bladder had been adherent. Behind it is firmly attached to the transverse colon. Traces of peritonitis in the form of thin flakes of lymph exist over the coils of intestine. An extravasation of blood has taken place into the tissues, about, or rather upon the peritoneum in the pelvic cavity, especially between the uterus and rectum. The corpuscles have subsided, and left a pale-yellow, fibrinous layer above, which is firm, and quite adherent to the parts about.

Heart and Lungs, quite healthy, a few ounces of fluid in left pleura. Slight atheroma in aorta and aortic-segment of mitral.

Spleen not enlarged, and of a deep brownish-red colour.

Liver looks a little larger than normal, and is of a dark-greenish colour. Scattered over the surface are a dozen or more tuberculous masses, ranging in size from a cherry to a walnut, white in colour, the larger of them with depressed centres. The anterior portion of the right lobe is separated from the rest of the organ by a shallow groove, the position of which on the body was just below the costal border. The left lobe is flattened, and its anterior margin notched. On section the liver substance is deeply bile-stained, the lobules are not very distinct. There are only a few of the cancerous nodules in the interior. On opening the distended gall-bladder it is found occupied by a large coagulum, the upper part of which owing to the sinking of the blood corpuscles, is decolourized. Hardly any serum was

present except that contained in the meshes of the clot. Nine or ten gall stones, about the size of marbles, and with numerous facets were found. At the neck a small irregular mass of cancer projects into the cavity, and completely blocks up the cystic duct. The walls of the bladder are thin, not cancerous, and at the posterior part just where the transverse colon is attached, there is a portion infiltrated with blood. On close inspection it is seen that here ulceration and destruction of the wall has taken place. There can be no doubt that by this process a vessel has been opened, and the hæmorrhage caused. The glands in the hilum of the liver are enlarged and cancerous, and compress the hepatic ducts. The portal vein does not appear to be interfered with.

Dr. Charles Murchison in his work on diseases of the liver, says that "tumours of the uterus and ovary have, in rare instances, been known to compress the bile duct and cause jaundice. It is sufficient here to mention the fact, as the diagnosis of these diseases from other causes of obstruction of the bile duct can seldom be difficult."

CASE OF SUPPRESSION OF THE SALIVARY SECRETION.

By Donald Baynes, M.A., M.D., L.R.C.P. Edin.

Late Clinical Assistant at the Hospital for Diseases of the Throat, London.

The following case came under my observation last November. It is the first of the kind I have seen, or, in fact, have either read or heard of.

The subject of this curious malady, J. B., aged 32, an hostler and driver at a livery stable, came to me November 10th, 1876, complaining of great dryness of the mouth, inability to swallow food, unless washed down by a draught of fluid, and a desire to spit in order to clear his throat but inability to do so. He said that he felt as if the tongue was too large for the mouth and as if his mouth was filled with bird-lime or tallow. He was continuously obliged to wash his mouth or drink both night and day. He

was unable to sleep more than one hour at a time owing to his mouth and throat getting so dry that he thought he would choke.

On examining his mouth I found the tongue swollen and covered with a thick white fur; at the junction of the lips with the gums might be seen a substance resembling the roe of a fish extending quite round and on both jaws. This I at first thought was a growth of a vegetable or fungoid character, it, however, on examination by the microscope, turned out to be composed of starch granules, &c., and was, in fact, simply the detritus of his food, which had collected there owing to the want of saliva to wash it away. On examining the ducts, Steno's and Wharton's, they were found open, and no obstruction existed in them to account for the singular phenomenon. The man's health otherwise was excellent. He, however, about the 20th of October, had been suffering from a severe cold, in an attack of tonsillitis, which yielded to the ordinary treatment.

The suppression of saliva lasted about three weeks, during which time I gave various stimulating gargles, together with pot. iod. and nux vomica and quinine and iron, with an occasional aperient, but to no avail.

Nov. 28th.—I passed a probe into Steno's duct, and connected it with the negative pole of a galvanic battery (zinc-carbon, 12 cells.) The positive pole I applied to the nape of the neck, this seance I kept up for about ten minutes frequently reversing the current. The battery hardly was in use for 3 minutes when he said, "Oh, my mouth is much moister." He returned next day and said he had slept all night, and his mouth felt better. I repeated the electricity, which was followed by a copious flow of saliva, since which time he has had no return of his previous symptoms.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Acute Bright's disease, accompanying pregnancy; miscarriage, peritonitis, death, autopsy. Under the care of Dr. ROSS. Reported by MR. C. L. COTTON.

M. D., 27, servant, admitted November 2nd, 1876, for dropsy.

History.—Family history good. She was married last February. She always enjoyed very good health before her marriage, occasionally suffering from indigestion. Her catamenia were always regular. Since first of last May her menses have ceased. During the month of June she vomited every morning on rising. After that she felt heavy and indolent, but she always had a good appetite. About two months ago her legs were very stiff for three days, but this disappeared. About the middle of last summer she perceived her abdomen getting enlarged, and she thought she was pregnant. It did not increase very rapidly until about four weeks ago. Her face, feet and abdomen became puffed up. In about three days it disappeared from the face and feet, but the abdomen did not lessen in size. During this time she did not notice her urine appreciately diminished. The abdominal swelling has gradually increased in size until the present time. She never perceived any movements of a fœtus in utero. Since last Sunday the swelling has come into her feet again.

Present condition. — Sallow complexion. Abdomen immensely enlarged. Umbilical girth 44 in. From ant. sup. spinous process to umbilicus on both sides, 11 in. From pubes to umbilicus, 8 in. Umbilicus to ensiform cartilage, 8 in. Abdominal walls very tense and shining. There are numerous dark purple lines, about ¼′ broad, on the inferior abdominal zone on both sides, corresponding to the lineæ albicantes. The small superficial arterioles are injected in several places.

Fluctuation very distinct all over the abdomen. Sides and inferior part of abdomen dull on percussion. Ant. and sup. part from umbilicus to ensiform cartilage gives an amphoric note. Umbilicus on a level with surrounding surface.

Heart.—Apex beat in fifth interspace ; very apparent. Area of præcordial dullness normal ; action of heart very rapid. A systolic murmur at base. Heard best at mid-sternum.

Lungs.—Physical signs give negative results.

Breasts. — Enlarged. A distinct dark areola around the nipples. Nipples turgid and prominent.

Vaginal examination.—Os uteri œdematous and patulous. Finger can be introduced into the cervix.

Legs, from knees down, œdematous. Considerable anasarca over the hips.

Tongue clean and moist.

A good deal of soreness on the right side—the side on which she always lies. Back is very œdematous.

Urine.—Only 5 oz. during last 24 hours. Turbid, smoky and opaque. About 75 per cent. albumen ; no sugar ; numerous epithelial and granular casts, and a large quantity of epithelial cells and numerous blood corpuscles. She vomited once during the morning. Had no sleep last night. Complained of a pain in the pit of the stomach, which was relieved by vomiting. Ordered : Pulv. jalapæ co., ʒi. ; pot. bi. tart, ʒss. ; *sum. nocte* and pot acet, xx. grs ; infus digit., ʒij., to be taken every four hours. Plenty of diluents and dry cupping to the back, to be followed by poultices.

November 4th.—The powder moved her bowels four times. Very little urine besides that passed at stool. Slept very well. Superficial veins of the abdomen and chest distended and very apparent. Vomited last night. Abdomen feels very sore. Tongue slightly coated. Not much appetite, but a good deal of thirst. Pulse very quick and weak. Feet and legs anasarcous. Urine presents the same appearance.

November 5th.—Did not sleep. Had severe pains in the bowels, and complains of a soreness over the midsternum at base of heart. Had two movements of bowels last night ; 5 oz.

urine besides that passed at stool, dark and turbid. Abdomen very tense. Right loin very sore—the side on which she lies. Tongue slightly coated. Appetite rather better, and not so much thirst. Pulse very quick, 140 ; small and rather weak. Vaginal examination shows very little bulging in Douglas' culde-sac and ballottement is very distinct. Left loin gives a tympanitic note and right loin tympanitic with a certain amount of dullness. The abdominal dullness is on a level with the umbilicus.

November 6*th.*—Slept well. Feels sore over the abdomen. Appetite better ; no vomiting ; not troubled quite so much with wind. Pulse, 136, weak. Abdomen very tense and shining. Feet rather more œdematous ; no soreness. Tongue clean. Two movements of bowels last night ; 5 oz. urine ; about 50 per cent. albumen.

November 7*th.*—Slept pretty well, but had severe pains across the bowels, as if from wind. Bowels moved twice ; 10 oz. urine ; about 25 per cent. albumen. Not much appetite. Tongue slightly coated. Urine not so smoky-looking ; quite clear when passed : abdomen slightly less tense ; casts still present in urine.

November 8*th.*—Slept very well. Bowels moved three times. An occasional pain in abdomen ; girth, 44 in. Appetite better. Abdomen still tense ; 7. oz. urine ; a heavy deposit of lithates ; numerous casts ; not more than 15 per cent. albumen ; urinates often, but only a small quantity at a time.

November 9*th.*—Slept very well. Has a frontal headache. Had severe pain in her bowels last night ; bowels moved four times ; 5 oz. urine. Pulse still very quick, 132. She is a good deal more swollen, especially the right foot and leg. Appetite still very poor. Vomited twice last night, after taking the medicine. Casts in urine, but no blood corpuscles.

November 10*th.*—Only 43. urine. Two stools, at which only a very small quantity of urine was passed, with a heavy deposit of lithates. Troubled very much with nausea and flatulence ; no appetite ; amount of albumen increased.

November 11*th.*—Vomited twice last night. Pulse rather

slower, 116, and stronger. Temperature normal. Feet still very much swollen. Bowels moved twice this morning ; 7 oz. urine ; 25 per cent. albumen.

November 12*th*,—No more vomiting. Right foot more swollen.

November 13*th*.—Severe pains in abdomen last night and to-day ; girth, 44½ in. ; very tense. No appetite ; very anxious. Tongue clean. Bowels moved once by a powder ; 7 oz. urine, besides that passed at stool ; clearer than it was ; a smaller deposit of lithates ; about 40 per cent. albumen ; casts still present. Ordered: Pulv. jalapæ co., 3i ; pot. bi-tart., 3ss.

November 14*th*.—Abdomen more tense and very painful. Superficial veins fuller. A large mass of œdematous tissue on right side. Appetite improved. Medicine operated twice freely, and besides that 7 oz. urine ; albumen same ; girth, 46 in.

November 15*th*.—A good deal of pain in the bowels last night from flatulence and retching, but no vomiting. Had chloral, which gave her a good night's rest. Some erythematous patches on lower part of abdomen. Pulse, 124, weak. Bowels moved twice ; 8½ oz. urine ; about 25 per cent. albumen. Right side still sore. Mixture stopped, and ordered : Spt. eth. nit., 3i ; tr. scillæ, 3ss. ; inf. scop., ℥j., 6, q, h.

November 16*th*.—Ordered a hot air bath.

November 17*th*.—Had the hot air bath for ten minutes yesterday, at 3:30 P. M., and about 6 o'clock perspiration broke out on her face, and during the night she perspired very freely—drenched in perspiration. Slept well, and since 6 P.M. she has passed 46½ oz. urine, much clearer. No pains, but much soreness in back and loins. Much more cheerful. Girth, 43½ in. Feet about same. Abdomen not quite so tense. Tongue cleaner. Pulse stronger, 120. Appetite very good. Feels altogether better. Urine acid, 50 per cent. albumen. Casts still present.

November 18*th*.—Slept badly. Had severe pains in right side and in bowels. Had a hot air bath this morning, but it has had no effect yet. Urine, 20 oz. ; same qualities ; girth, 44½ in. ; abdomen very tender.

November 19*th*.—Yesterday afternoon a profuse perspiration broke out over the body, and lasted until about 3 A. M. this morning. She slept well ; 30 oz. urine. Bowels moved four times.

November 20*th*.—Passed a good night. A pillow placed under the right side supported it, and since then she has had no pain in it. Girth, 44 in. ; 21½ oz. urine. Appetite better. Abdomen not so tense. Superficial injection not so extreme as it was. A vaginal examination shows the uterus low down in the pelvis. The os dilated to the size of a shilling. The bag of membranes protruding and distinct uterine contractions. No bulging in Douglas' cul-de-sac.

November 21*st*.—Last night, about 6 o'clock, she miscarried of a male fœtus of about six months. Dead apparently some time. A footling presentation. Very small quantity of liq. amnii. Placenta, battledore, friable and slightly fatty. The uterus contracted well ; no hemorrhage. Skin of fœtus a good deal discoloured. Feels better to-day, and is quite cheerful. Slept pretty well during the latter part of the night. Abdomen apparently in much the same condition ; girth, 43 inches. Fluctuation very distinct. A good deal of tenderness in left side, with œdema. Feet about same. Very œdematous. Appetite good. Pulse 120. Temperature normal. Tongue clean. Bowels moved twice. Urine contains about 15 per cent. albumen, and a few casts.

November 22*nd*.—Yesterday, about 3 p.m., she had a very severe rigor, followed by a rapid rise in temperature to 102·2. Pulse 160. Vomiting, great pain in abdomen, and tenderness. Morphia was given, but it could not be retained. Vomiting continued the greater part of the night. In the morning she fell into a state of collapse, and died at 9 a.m.

AUTOPSY, BY DR. OSLER, EIGHT HOURS AFTER DEATH.

General Appearance.—Body that of a medium-sized woman. Rigor mortis has not yet come on. Face swollen, and a dirty-yellowish fluid oozes from the mouth. Pupils of moderate size. On pressing the breasts a milky fluid flows from the nipples.

Abdomen enormously distended ; the skin near the hypogastric regions thickly set with lineæ albicantes. Thighs and legs œdematous, the right more than the left ; both of alabaster whiteness.

Thorax and Abdomen.—Twenty pints of opaque, somewhat milky serum, mixed with flocculi of lymph, were removed from the peritoneal cavity. Both visceral and parietal layers of this membrane of a bright rosy colour, due to the intense injection of the finer vessels. Thin flakes of lymph covered over the coils of intestines, in many places matting them together. The liver was closely united to the stomach by a tolerably thick layer of greyish-white lymph. The pelvic peritoneum also involved ; the ovaries are dark in colour and coated with exudation. The stomach and intestines are much distended, their coats infiltrated and easily torn. No effusion into the pleural sac or in the pericardium.

Heart.—Right chambers gorged with blood, and in removal over 30 oz. escaped from the cut vessels into the pleural cavities, and there speedily coagulated. Right ventricle : no antemortem clots. Tricuspid and pulmonary semi-lunar valves healthy. Left ventricle firmly contracted and hard to the touch. Cavity small. No clots. Anterior segment of mitral valves thickened, and aortic valves competent.

Lungs.—Right, adherent posteriorly, and at the apex by a few bridles. Organ crepitant except at base and hinderpart of lower lobe, which is very dark in colour, collapsed, and almost airless, and contains a large amount of blood. Left.—Upper lobe, with the exception of the extreme apex, in a state of engorgement, the section bathed with much blood, and the tissue almost airless. Posterior parts were also much congested, and six small apoplexies are present. The anterior portion of the lower lobe alone presents a natural appearance.

Spleen.—Firm, dark in colour. A fissure exists at the anterior border. A fresh hemorrhagic infarction presents in this situation irregularly wedge-shaped, $1\frac{1}{2}''$ long by $\frac{1}{4}''$ in width, colour reddish-yellow, with a zone of hyperæmia about it.

Left Kidney.—Capsule easily detached (except at one spot) and thin. Organ soft, rounded, and swollen. The surface of

the cortex is smooth, the venæ stellatæ small but uniformly filled. On section, not much blood exudes, the cortex is pale, opaque, and mottled ; the Malpighian tufts are distinct, but only here and there are the loops of vessels passing down the cortex, full. The pyramids are of a uniform dark red colour. *Right.* Presents the same appearances. The pelves of both are injected, and about them is a moderate amount of fat.

Bladder contains hardly one drachm of turbid urine. Mucous membrane appears healthy, the smaller vessels injected in places.

Stomach.—Much distended with gas, and contains about a half pint of dirty-yellowish fluid. Mucous membrane looks natural.

Intestines.—Beyond the swelling and infiltration of the coats, there is nothing special to be observed. A single ascaris found in the duodenum.

Liver.—Consistence good. On section lobules distinct, and much blood flows from both large and small vessels.

Brain.—By request, not examined.

Reviews and Notices of Books.

Cyclopædia of the Practice of Medicine.—Edited by Dr. H. von Ziemssen. Vol. vi. Diseases of the Circulatory System, together with the chapters on Whooping Cough, Diseases of the Lips and Cavity of the Mouth, and Diseases, of the Soft Palate. By Professor Rosenstein of Leyden ; Prof. Schroetter of Vienna ; Prof. Lebert of Vevay ; Prof. Quincke of Berne ; Dr. Bauer of Munich ; Dr. Steffen of Stettin ; Prof. Vogel of Dorpat, and Professor Wagner of Leipsic. Translated by G. W. Balfour, M.D., of Edinburgh ; E. G. Geoghegan, M.D. of London ; Thomas Dwight, M. D., Boston ; J. H. Emmerson, M.D., and G. G. Wheelock, M.D. of New York ; and J. Solis Cohen, M.D. of Philadelphia. Albert H. Buck, M.D., New York, Editor of American edition. 8 vo. pp. 1014. New York, William Wood and Company, 27 Great Jones Street, 1876.

This important work is fast approaching completion, the volumes so far have come out with regularity,—that is, not precisely in regular order, but still the translators have done their work well, and the publishers fulfilled their engagement to

give the volumes almost with as great regularity as they have appeared in the original. In this volume, the sixth of the series, the first article is from the pen of Professor Rosenstein of Leyden. The author begins his article by an introductory chapter on general anatomy of the heart, the changes in form and position and the origin of heart sounds. He then touches upon the method of examination., the physical signs or symptoms of heart disease. In treating of the pulse he illustrates the subject by several sphymographic tracings showing alterations in the pulse wave in a vareity of conditions. The author then passes on to the consideration of diseases of the endocardium, giving at the outset a short historical sketch of the subject. He shows that inflammations of the endocardium terminate either in ulceration, thickening of the membrane or villous formations, which, in course of time undergo further change, andhe discusses the subject under three heads:

"1. Acute, ulcerative or diphtheritic endocarditis.

"2. Acute and subacute verrucose endocarditis.

"3. Chronic sclerotic endocarditis."

The author then passes on to the consideration of diseases of the valves of the heart as resulting from these conditions. The next paper is from the pen of Schroetter, on the changes in the position of the heart, and also diseases of the heart substance. In respect to change of position, the author mentions some very unusual cases, which have been reported, and he remarks that "in spite of opposing statements it is now settled beyond all doubt, that in changes of position of the body the heart follows the laws of gravitation." We were not aware that this ever was questioned, as it is customary in making an examination of the heart to lean the patient forward so as to bring the organ as near to the chest wall as possible, but besides these cases of changes of position of the heart we have others of greater moment to the patient, such as changes which are caused by pressure, as in pleuritic effusions of any kind, or again changes in position of the heart in spinal curvature, or in thoracic or abdominal tumours, due to contraction, or diminution of the size of the lung, resulting from previous existing disease. In such cases, according

to our author, the change in position of the heart, is often very considerable. These changes in position, although they may be quite noticeable, and will aid the observer in his diagnosis of the condition present, yet they seldom give rise to symptoms referable to the heart itself, the alterations are gradual in their development, and the heart itself rarely suffers. The author then passes on to diseases of the heart-substance, taking up seriatim hypertrophy and dilatation, atrophy of the heart, inflammation of the heart-substance and the formation of abscess, partial aneurism of the heart, fatty degeneration, colloid degeneration, spontaneous rupture of the heart, wounds of the heart, traumatic rupture, foreign bodies entering the heart substance. New growths and parasites of the heart form the next subjects of discussion, and he concludes this most interesting paper with a short account of heart clots, and nervous palpitation of the heart.

We have next a short description by Prof. Lebert of congenital malformations of the heart. In this paper the author follows the classification of Kussmaul, who has done more than any other writer to elucidate this subject. There is considered congenital narrowing or closing of the mouth of the right side of the heart; stenosis and atresia of the pulmonary artery, with closure of the septum; stenosis of the right conus arteriosus with an opening in the interventricular septum; stenosis and atresia of the pulmonary artery, with an opening in the ventricular septum; and combined stenosis and atresia of the pulmonary artery. The author points out the connection between these congenital conditions and the development of tubercle. In stenosis of the pulmonary artery the circulation is greatly disturbed, and in very many of these cases there is found imperfect development of lung substance. The author states that direct disturbance of the supply of blood going to a part—an unequal distribution of the blood—is more liable to give rise to irritation, and is more conducive to inflammation, than an excessive but regularly increasing supply, and he remarks, "it is a difficult question to decide how much the excessive supply of arterial blood to the lungs eventually disturbs their nutrition."

Diseases of the arteries, veins and lymphatics form the subject of the next article from the pen of Prof. Quincke. Morbid affections of the external, middle and internal arterial coats are taken up and discussed seriatim. Acute and chronic affections and their consequences, resulting, in many cases, in hypertrophy of the arterial coats, atrophic degeneration, fatty degenertion, calcification, amyloid degeneration, &c.. and he points out that these various conditions have been found to exist in syphilitic subjects. General dilatation of the arteries, &c. after which the author discusses the subject of aneurism. After giving the various methods of treatment he observes, "that of all the local methods of treatment, next to ligature and compression, galvanopuncture is most deserving of confidence." Narrowing of the arteries is the next subject under discussion, and he closes this part of his paper by the consideration of rupture and perforation. Diseases of the veins and of the lymphatics form the subjects of the balance of this very excellent paper.

Dr. Bauer in the next paper treats on diseases of the pericardium. Commencing with malformations, such as absence of the pericardium, the formation of diverticuli and tendinous spots, or milk spots as they have been termed, due apparently to local pericarditis with exudation, although this is denied by some writers. He then treats on inflammation of the pericardium, tubercular pericarditis, adhesions between the visceral and parietal layers of the pericardium, pneumopericardium, hydropericardium, hæmopericardium and free bodies in the pericardium.

The remaining papers in this volume do not properly belong to it, but the editor in a note intimates that "owing to the great size of volumes VII. and VIII., it has been deemed best to incorporate the article on whooping cough, as well as those on diseases of the lips, cavity of the mouth and soft palate, into this volume." These several articles are written by Dr. Steffen, Prof. Vogel and Prof. Wagner, and are full of interest. The Cyclopædia maintains its position as a work of importance, and readers will find in it subjects treated of, which are not to be found elsewhere. It is of great use to the real student of the science of medicine, and its practical teaching is by no means deficient.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Surgical Electrolysis.—*The Progrès Medical* gives a very interesting *resumè* of the history of this valuable application of electricity, and the results of its use up to the present time.

The decomposing action of the pile on water and on salts had just been discovered, when Brugnatelli, Dumas, and others studied also its effect upon animal matter. Plunging a piece of flesh by its two extremities into two vessels full of distilled water, each vessel was connected with the electrodes: there was found in the negative vessel, potash, soda, lime and ammonia; and in the positive vessel sulphuric, hydrochloric, phosphoric and nitric acids. After several days, during which the current was passing without interruption, it was found that the piece of muscle was completely deprived of its salts. In another experiment, Davy introduced two fingers into the vessels, which were in connection with the piles, he equally established the presence of the acids in the positive vessel, and of the alkalis in the negative. Therefore the action of the currents is the same on the living tissue as on the dead.

In 1860, Cinisslli (of Cremona), conceived the idea of utilizing the properties of the electric currents for the destruction of morbid tissues. In fact the alkalis and the acids generally by the currents in the substance of the tissues, react in their turn on the neighboring elements; they cauterize them as when one applies caustics to the surface of a sore or to the skin. It is to this chemical action of the currents in the tissues, that the name electrolysis has been given, a term employed first by Faraday to designate the action of the pile on water.

The needles used for electrolysis are of platinum or copper gilt, in order that they may not be attacked by the acids or the bases which result from the decomposition of the tissues by the electric currents.

Sometimes one needle is introduced into substance of the tissues, sometimes both. The action of the two poles is different: at the positive electrode are the acids, at the negative the bases; around the former an eschar, hard and dry is produced; at the latter it is an eschar, soft and moist, which appears, as when a part is cauterized with potash; later, there is a cicatrix, fibrous and retractile, or slight and not adherent to the subjacent tissues, according to the pole which has acted. It is easy in practice to utilize these different properties of the two electrodes; it suffices to render one of them inactive, and reduce its rôle, merely to serve for closing the current.

This application of electrolysis, which is called chemical galvano-cauterization has been used with great success in the treatment of fistulæ in various situations, and for the cure of strictures of the urethra, and nasal duct. Thus far we have only spoken of the application of electrolysis to the chemical cauterization of the tissues; it has another rôle equally important.

When a curent is passed through a solution of white of egg, the acids produced coagulate the albumen. An analogous result is obtained by the action of the currents on blood which has just been drawn from the veins. Two English doctors, Fraser and John Duncan, have recently analysed with more care the effects of the currents upon the blood. At the positive pole, is formed a greyish mass of small volume, but of very firm consistence. There appears on the contrary, at the negative pole a sort of mass of foam composed of gaseous, viscous vesicles, and of a volume greater than that at the positive pole. A third product is formed with great abundance; it is a liquid having the colour and appearance of fluid tar.

For a long time the cure of aneurism has been attempted by electricity. Dr. J. Duncan only has determined the different actions of the two poles. According to him, if the currents of which he indicates the intensity and nature are used, at the positive needles (in aneurisms of considerable volume, several needles in communication with the positive pole can be introduced) there are formed hard fibrinous masses. He also estab-

lished in several autopsies, that after a certain time, the masses formed by the galvanic action assumed consistence, became decolorized and stratified like the masses which are obtained by intermittent digital compression. The accidents which have followed the application of the currents are, inflammation of the sac, the formation of an eschar along the track of the needles, principally of the negative needles, and on the separation of these eschars, a fatal hæmorrhage, gangrene of a part of the walls of the tumour, and finally the displacement of the masses and embolism.

To avoid the most of these accidents, Dr. Duncan has used since 1866, needles insulated by a coating of vulcanized caoutchouc. Ciniselli tried, by the aid of the current, to produce first a mass of moderate volume at the end of the needles; this, he thought, acted as a foreign body, and became the centre of an abundant coagulation of blood. Duncan, on the contrary, endeavors to fill the sac as rapidly as possible, in a small number of sittings, with the products of electrolysis; with his needles insulated, he affirms that he has no grave accident to fear, and particularly he avoids the eschars along the track of the needles and inflammation along the walls of the sac. Also as he has recognized the special action of the positive pole in the formation of resistant masses, he introduces the two poles at the same time. He utilizes the special action of each of the two electrodes; he produces at the same time firm clots and soft clots, and rapidly the tumour is filled with a large solid mass. If the first application does not produce satisfactory results is is well to wait some days; for it is possible that the clots formed primarily may be the origin of secondary coagulations. Let us add that he employs batteries of considerable electro-motive force; if the two needles are introduced, he uses six cells of moderate size; if he introduces only one needle, in small aneurisms and in fusiform aneurisms, a large number of small cells are used.

In 37 cases of aneurism of the aorta treated by electrolysis, six complete cases have been observed; three deaths only were attributed to the operation, and these were due to the fact that

the needles used were not insulated, eschars formed in their track, and a fatal hæmorrhage occurred. We ought to remark with Dr. Duncan that, in the six patients cured, in no case were observations followed up for more than nine months after the operation. But if, without regarding the pretended complete cures we consider the effects of the mode of treatment we find that always a notable improvement followed the opera, tion ; not only a lessening in the violence of the pulsations, but also a complete arrest in the development of the tumour, a notable diminution in the pain, or the disappearance of alarming attacks of suffocation.

There are recorded for aneurisms of the innominate, carotid and subclavian, thirteen operations, yielding three complete cures, six deaths. The external iliac artery, two cases, one cure. The femoral, popliteal and brachial arteries, twenty cases, sixteen cures, three deaths ; smaller vessels, eight cases, six cures. Total : 89 cases, 12 deaths.

In cirsoid aneurisms the effects produced by electrolysis are much more favorable still to the employment of the method. In four cases there are three absolute cures. The needles in this variety of sanguineous tumours cauterize the walls of the vessels, coagulate the blood, and easily induce an obliterative retraction.

Dr. Duncan has treated by electrolysis two *aneurisms by anastomosis*. He has reduced considerably and arrested in its onward progress a vast tumour of this kind occupying the neck, the temple and the parotidean region. He has had the same success in a case in which the mass covered the inferior part of the neck and the clavicular region ; it communicated, however, with the subclavian vein. In all these tumours, by reason of the large communications of the arteries and the veins, it is necessary to destroy them little by little by the electrolysis ; thus the eschars and the consequent hæmorrhages are avoided.

Nævi only become dangerous when they tend to progress in surface and to increase in volume. Electrolysis can be utilized in two ways it cauterizes at the surface, and in the interstices of the tissues, but if it is advisable to avoid the eschars of the skin, which are apt to follow, it is necessary to use insulated needles and to introduce them obliquely.

It has finally been pretended that electrolysis could cure *malignant tumours;* but this is not the case. Sometimes, however, interstitial cauterization by means of insulated needles has removed the intense pain which allowed no rest to the patients, and which completely disappeared. A vascular sarcoma of the thigh has been very much reduced in volume; several goitres, very rich in vessels, have also lost their pulsations.

The uses of Pepsin in medicine, and its preparation.—Physicians are now falling more and more into the habit of employing in practical therapeutics those substances which are produced in the healthy organs for effecting digestion. Amongst these pepsin must always preserve the most important position, because others, such as pancreatic juice, bile, &c., must, when administered by the mouth, pass through the stomach, which by its acid secretions modifies or destroys their efficacy as ferments.

There have been some attempts to employ the peptones as therapeutical digestive agents. These are, however, open to very serious objections, and have great disadvantages, by reason of the readiness with which they decompose into those very disagreeable substances, leucine and tyrosine. It is unnecessary to speak of their very disagreeable physical character; these products of the decomposition of the peptones are incapable of supporting the nutrition of the body; and as the object of the administration of the peptones is to make them readily available for such absorption, the promptitude with which they enter on the stage of decomposition is a very serious drawback. There is also great difficulty in preparing them in a state of purity; and even if this be successfully achieved, I believe it would still be much better to entrust the work of preparing the peptones to the stomach, and aid it in the task, when necessary, by the administration of pepsin.

I believe that the field of usefulness of pepsin in practical therapeutics is very great; and that it may be still further extended with very great advantage. But the success of this

remedy has been greatly hindered, and the result of clinical and of scientific experiment as to the results which may be obtained have been much confused by the number of comparatively worthless preparations which have been employed, and by the instability and uncertainty of some of those preparations, which in their most active states have from time to time yielded excellent results, and have thus attained a good reputation. The uncertainty of a potent remedy is almost as injurious and even more misleading than the inertness of a popular remedy, and the treatment of disorders of the digestion by pepsin has suffered greatly from both these drawbacks and from both these sources of fallacy.

Besides the cases of obviously defective and imperfect digestion, in which the use of an effective and reliable form of pepsin is directly and clearly indicated, there are various classes of disease in which the nature of the malady tends to produce imperfect digestion; and in which this defective digestion reacts so as to intensify the disease, by impairing the general nutrition of the body. Here pepsin may often be employed to break the vicious circle, and by artificially restoring the digestion and improving the nutrition, to facilitate the introduction and reaction of remedies, or otherwise assist in the process of recovery. Thus in chlorosis, digestion always suffers; the blood not being in a healthy state, the deficiency of blood-globules prevents the healthy hyperæmia of the stomach, which should result from the stimulus of food; the nutrition of the blood is injuriously affected, and the chlorosis is aggravated. It is found in practice that, as we would anticipate physiological observation from the administration of an effectual preparation of pepsin, by breaking the vicious circle, it becomes a powerful agent in the cure of chlorosis.

The process of cure of chlorosis by preparations of iron is not always, I believe, if indeed it is at all, that which it is commonly held to be. The quantity of iron contained in ordinary well-arranged dietaries is sufficient and more than sufficient to supply the wants of the blood and the tissues. The doses of iron which are administered therapeutically are of course enormously in

excess of what is required for the purposes of absorption and nutrition. We have in chlorosis a relaxed and atonic state of the intestines, and absorption goes on imperfectly. The effect of the various preparations of iron is to astringe and give tone to the intestinal coats, and by this action to facilitate the processes of digestion and intestinal absorption. For this purpose iron has a more advantageous action than the bitter tonics, because its action is more extensive upon the intestinal tract, and less easily destroyed and neutralized by the preliminary influence of the gastric juices.

Thus also in the exhaustion succeeding typhus, measles, and other debilitating diseases, the inanition is due to the impoverishment of the blood, and to the defective power of digestion. Hence it is necessary to administer food with great precautions. Strength is slowly recovered ; and any excess of diet is punished by symptoms of dyspepsia. The condition is one of anæmia, and to this is due defective digestion. Pepsin may be employed in the convalescence from all exhausting diseases with excellent effect. It facilitates nutrition, and at the same time directly quickens the restoration of natural digestive power.

Without dwelling upon this class of cases, of which the varieties will at once suggest themselves to the practitioner, I would refer to another series of cases, those in which imperfect digestion has for a time been successfully stimulated by the use of irritating condiments, pepper, mustard, vinegar, curry, or by the use of alcohol. Here the digestive powers presently become enfeebled, and do not respond to the peptic stimulus. These cases are of very ordinary occurrence in practice. The food remains in the stomach, and after undergoing only a partial digestion, enters one stage of putrefaction. In such cases, if vomiting occurs, it will be found that the matters vomited are of foul odour and alkaline reaction. So when children, after over-eating, vomit from indigestion, the matters ejected are of bad odour and evidently semi-putrid. On the other hand, when vomiting occurs during healthy digestion, as in sea-sickness, the contents of the stomach are acid, and have no putrid odour. The ordinary symptoms of this kind of dyspepsia are depression

of spirits, flatulence, foul evacuations, headache, distension after eating. In a great many cases the diarrhœa of children is due to defective digestion by the stomach; the imperfectly-digested and partially putrefying mass of food gives rise to irritating substances, which produce intestinal diarrhœa by reflex irritation transmitted from the nerves of the stomach. The occurrence of diarrhœa from this kind of reflex irritation may be illustrated by the well-known and prompt purgative action which is often found to follow the drinking of a glass of cold water in the morning before food. The water has not any inherent or direct purgative action, but it produces peristaltic action by the reflex transmission of the impression produced on the mucous membrane of the stomach. In all the above cases the use of pepsin is strongly indicated, and for the prompt and happy cure of this class of infant diarrhœa, which is often found to be very intractable to remedies, I know of nothing which is better worthy of trial than pepsin.

There are certain contra-indications of the use of pepsin, to which it may be well to refer. Among them are carcinoma and ulceration of the stomach. Where there is an ulcer of the stomach, it is an object of treatment to afford a smooth covering to the ulcer by bismuth, or by the administration of nitrate of silver; to administer pepsin is to incur the risk of hastening the process of thinning, which there is already too much reason to fear from the action of the normal pepsin of the stomach.

To fulfil the therapeutical indications of pepsin it is, however, necessary to have a pure and reliable pepsin. There are various methods of obtaining the article. Thus there is the method of Brücke, by treating the gastric juice(obtained by well-known methods) with a solution of cholesterine in ether; the cholesterine being precipated, enters into mechanical combination with the pepsin, and pure pepsin is obtained by removing the cholesterine by the further addition of ether.

This form of pepsine is absolutely pure, and from it may be learnt the qualities and powers of pepsin. But the method is too costly for general use, and its advantages are mainly for scientific purposes. There are various dry preparations of pep-

sin in powder and cake, which are well known, and, I believe, much used in medicine. But these preparations are very far from stable or reliable, and however active some of them may be when perfectly fresh, they do not remain active, and a large part of the pepsin powders prescribed are absolutely inert. Pepsin, although an albuminoid, differs among other things from ordinary albumen in being soluble in diluted alcohol. Advantage has been taken of this to prepare "pepsin wines;" but the alcohol does not prevent the ferment from undergoing change, and if a "pepsin wine" be examined after some time it will be found not to contain a trace of pepsin, and to be absolutely devoid of digestive power. I have found, many years ago, that to preserve the ferment of pepsin there is only one reliable agent, that is glycerine, the powerful preserver of vaccine matter and other animal ferments. My first researches on this subject, made many years ago, have been amply confirmed by a great number of observations, and for all scientific experiments on digestion, I have now for many years employed only these solutions. I strongly recommend practitioners for all therapeutical purposes to employ such a solution. In this way they will avoid the fallacies and disappointments due to the employment of deceptive and unequal preparations, and they will the more readily define the true limits of pepsin as a therapeutic agent, and its place in the armory of medicine. It is not to be reckoned among the most powerful and heroic remedies. but it is one which is of very agreeable and efficacious action; which very frequently gives exceedingly good results in large classes of ordinary and troublesome complaints, and which may be employed with confidence and advantage when its powers are stable and reliable.—By *Oscar Liebreich, M.D., Professor of Therapeutics in the University of Berlin.*

Mode of Union of Amputation Flaps.—(Read at the Congress of Lyons, by Dr. Azam, of Bordeaux).

M. Azam has long since removed the chimera of immediate union—chimera, because there is one part of the stump, the bone, for which immediate union is impossible. He has chosen

a method which consists in uniting certain elements of the stump, and leaving others to suppurate. Here is what it consists of: he makes his amputation by two flaps nearly equal, arrests all hæmorrhage as completely as possible, passes, in the bottom of the wound, in front of the bone, a very large drainage tube, previously washed in warm water; then, this drain being fixed, coapts the flaps, applies, to hold the muscles, two or three points of deep quill suture, with silver wire; he then coapts exactly the edges, and maintains them in apposition by a superficial suture, made with great minuteness, with as much care as in the face. We get thus a union by first intention of the skin and muscles: as to the bone, this mode of union would be chimerical; to try it would be dangerous. The dressing consists in applying cotton over the end of the stump, and enveloping the whole by a tight bandage.

At the end of three or four days we take off the dressing and remove the superficial sutures; the adhesion of the skin is perfect. As swelling of the subcutaneous tissues is produced, we untwist one of the deep sutures to allow of the development of the tissues. The drainage tube remains. M. Azam has completely renounced the use of injections. It is bad to introduce water into a wound: (1) because this water cannot be pure; (2) by reason of the mechanical effect, distension and pulling of the drainage tube, with injury to the neighbouring parts. Generally, everything does well. In some cases there are complications, the most common of which is secondary hæmorrhage. If a slight hæmorrhage occur from the fifth to the seventh day, it unglues the flaps, and pus is produced in the deep parts of the wound; it is sufficient then to destroy the deep part of the suture.

M. Azam has seen a stump absolutely healed on the eleventh day; the greatest number from the twelfth to the sixteenth; some from the twentieth to the twenty-fifth day. That is a good result.

Assuredly this method, which belongs, for the rest, to several surgeons of the hospital Saint Andrè, of Bordeaux, is only a

resumè of certain previous practices; that which constitutes its originality is the addition of the drainage tube, which assures the escape of the pus from the deep parts. We apply closely the subcutaneous parts, and assure this thing if necessary, the repose of the flaps.—*Revue Médico-Photographique des Hopitaux de Paris*, Nov. 1873.

A New Sign.—A new sign, from inspection of the Ear, indicating respiration in the new-born.—(By Dr. Gelle.)

We draw particular attention to this work of M. Gellè, which furnishes to the medical jurist a new means of recognizing, in the case of infanticide, if the new-born infant has breathed, and which makes a useful adjunct to the signs furnished by the lung test.

In the fœtus the middle ear is void of air, and filled with a gelatinous magma. By the act of respiration this magma disappears, and in its place air invades the tympanic cavity. This transformation takes place in the following manner: under the influence of respiration, and the derivation of blood towards the new vascular region opened to the circulation, the contents of the tympanic cavity become absorbed. This reddish, thick mucous matter, becomes pale and thin, and leaves only a surface. The cries, and the efforts at suction, favour the aeration and the circulation of the cavities. The time necessary for the complete establishment of these two functions is proportionate to the vigor of the respiratory function; it averages three hours. On the contrary, if the respiration languishes, if asphyxia, slow or rapid, take place, the aëration of the cavities is incomplete, often only unilateral; it can be abortive.

In this case, one finds, at the autopsy, an intermediate condition of the intra-tympanic contents, in which the fœtal state manifests itself clearly, notwithstanding the certain presence of air.

When the lung test is impossible, or if it gives doubtful results, the expert can find, by inspection of the ear, signs

confirmative or negative of the penetration of air, and of the respiration of the infant. Furthermore, this examination of the middle ear of the new-born infant will enable one to judge of the kind of death, of its cause, whether by hæmorrhage or by asphyxia, &c., &c.; and also of the period at which death has taken place, before or after birth, before or after the first inspirations.

Death by hæmorrhage can, by anæmia, bring about the artificial production of the auricular vacuum: it is sufficient to state this cause of error.

To the question, Has the child breathed? the expert can reply in a satisfactory manner, verifying the conclusions of the lung test by the results of inspection of the ear.

In late investigations, undertaken a long time after the period of the crime, or of the burial, the lung test giving no evidence, one will be right in reckoning upon the persistence of the auricular sign of the fœtal state. Thanks to the resistance of this gelatinous magma to the causes of decomposition and putrefaction, justice will yet know the truth, and the absence of respiration will be susceptible of a demonstration clear and precise. In a word, when the expert finds the middle ear free from air, and filled with this gelatinous magma, he is authorized in concluding that the infant has not breathed; when the magma has disappeared, and air has penetrated the cavity, he should conclude that the infant has lived the extra-uterine life.

Inspection of the middle ear, then, of the new-born, is expected to render great services to legal medicine.—*Mouvement Médical*, March and April, 1876.

Four Cases of Movable Spleen.—(1.) A boy 15 years of age who had suffered for seven months from intermittent fever. The spleen was very hard, upper end extending in the left hypochondrium, the lower in the right upper abdominal region. The fissure was plainly to be felt, with alterations in position the tumour also changed, while in the normal situation, the splenic dulness was absent. The symptoms complained of were sensations of pressure on the stomach, and loss of appetite.

(2.) A woman 39 years of age, x para, who had formerly suffered from typhoid. The spleen lay at the left of the pubic arch, readily movable, and not painful. The change in position followed an injury.

(3). A woman 43 years of age viii para. The spleen was situated just above the navel, and could be easily pushed up.

(4.) A woman 48 years of age, nullipara, who had long suffered with ague. The spleen is absent from the usual position, but can be felt between the navel and anterior superior spinous process of the left side, and can be pushed up. Except in the 2nd case, in which there was apparently a traumatic luxation, the condition appears to depend chiefly upon the increase in size of the organ. The spleen is supported by the phrenico-lienale and gastro-lienale ligaments, lying upon the first, which by stretching, adopts itself to enlargements of the organ. If such takes place without this ligament yielding to it, the spleen being no longer fixed, becomes movable. The extent of movement will depend upon how far the gastro-lienale ligament also yields ; the more it does the greater will be the motion, but the less the traction upon the stomach. The great relaxation upon the abdominal walls in women who have borne many children is not without influence in the production of this condition.—(Muller, Pest. Med. Chir. Presse.—Ctb. Med. Wis. No. 3, 1877.)

Use of Chloral Hydrate in Labour.—Dr. Polaillon has employed chloral in labour in thirty-two cases in the form of clysters 2–3 grmm. (30 to 45 grains) to 30 grmm. of water, (℥ij). 4 to 5 grmm. of chloral generally used. It diminished the acuteness of the pains without destroying their force or frequency in some cases. In the majority of cases, however, whilst it diminished the pain it lessened the contracting power of the uterus, and the labour came to a stand-still. Dr. P. only recommends it where there is excessive muscular contraction of the uterus, and where the pains are very severe. He strongly objects to its use in normal labours.—(L' Union, 45, 1876.) Quoted in *Schmidt's Jahrbücher*, Bd, 172, No. 11, 1876.

Peritonitis in Children.—By Dr. S. Kersch, of Prague (*Memorab* xxi. p, 251, 1876.)—The difficulty of the diagnosis of peritonitis is in the inverse ratio of the age of the child. The younger the child the more difficult is the diagnosis. The following points are worthy of notice. A child suffering from peritonitis always has its legs drawn up, respiration is shallow, rapid, and is not abdominal but costal; the child can't cry out loudly. The cry itself is pathognomonic of the disease, it is single, long-drawn out and suppressed, the pauses between the cries are long and filled up by a number of short inspirations. The prognosis of peritonitis in children is more favorable than in adults. All the female children treated by Dr. Kersch, that recovered were in after years sterile. Treatment consists in local bloodletting, cold applications, and the abdomen must be carefully covered with gutta percha paper. Morphia to be used as soon as the bowels have been completely emptied. When there is a good deal of fluid exuded, the early use of the trocar is advised. Dr. Kersch relates a case which was serious and which recovered after several punctures. — Quoted in *Schmidt's Jahrbücher*, Bd. 172, No. 11. 1876.

Treatment of Pityriasis by Solution of Chloral.—(Dr. Martineau.) — Dr. Martineau has had much success in the treatment of Pityriasis Capitis, by using a 5 per cent. watery solution of chloral; of this he takes two spoonsful and washes the head every morning but does not dry the washed places. By this treatment he says the disagreeable symptoms soon disappear and the case is cured sometimes in a few days, but generally in about a month. If the disease has lasted some time it generally returns, but can again be cured by the chloral solution. If the Pityriasis is accompanied by erythema or papular exanthem, he recommends a mixture containing 500 parts of water, 25 chloral hydrate, and 100 parts liq. Van Swieten, (0.1 Hydrarg bichlor. corros.; spirit vini rectif und aq. ana 50.00).—*Bull. de Ther.* xc. page 49, Janv. 1876.—Quoted in *Schmidt's Jahrbücher*, Bd. 172, No. 12, 1876..

Peroxide of Hydrogen.—Peroxide of Hydrogen for the prevention of the spread of Scarlet Fever and Small-pox.—By John Day, M.D.

In October, 1875, by request of the Mayor of Melbourne, I drew up a report which was subsequently published by order of the local Board of Health, on fifty-one cases of scarlet fever which had been treated by me between April, 1873, and April, 1875. These comprised all the cases of scarlet fever which had come under my charge during that period. They were all treated in a similar manner. Each patient was freely rubbed over the whole surface of the body three times a day with a preparation composed of one part of ethereal solution of peroxide of hydrogen (erronously called ozonic ether) and seven parts pure lard, well incorporated with the aid of heat. The inunctions were continued for about three weeks. No other remedies were prescribed, except in a few cases where the throat symptoms were severe, when a gargle composed of two drachms of ozonic ether in eight ounces of water, was ordered to be used every second hour.

These fifty-one cases occurred in thirty-eight different houses, and in four houses only was there any extension of the disease. There were no deaths. Since the above-named period I have attended sixty four cases, occurring in fifty different houses, and in three houses only was there any extension of the disease after I had commenced my treatment. I have been less fortunate, however, in my results, having had six deaths.

Peroxide of hydrogen contains a larger amount of oxygen than any other known substance, and moreover, one half of its oxygen is loosely combined and in a highly active condition, ready to combine with any organic matter with which it may be brought in contact; so that it would appear to be an agent specially suited for the destruction of the poison-germs of scarlet fever, small-pox and other epidemic diseases. Dr. William Squire, in an excellent paper "On Sanitary Precautions against the Infectious Eruptive Diseases," read before the National Association for the Promotion of Social Science, says—"It [infection] cannot be carried far in the air, for fresh air oxidates

d destroys it, so that for the most subtle disease the infecting distance is small." Now, the loosely combined atom of oxygen in each molecule of peroxide of hydrogen is infinitely more potent as an oxydiser than the oxygen of the atmosphere; consequently I think it is reasonable to infer that by coating the body of a person suffering from scarlet fever or small-pox—diseases in which most of the poison is eliminated by the skin—with peroxide of hydrogen in combination with lard, cacoa butter, cold cream, or any other substance which will conveniently retain it, we are reducing the danger of infection to a minimum. I have recently slightly modified my formula for the external application, and now generally prescribe it as follows: Ozonic ether, four drachms; pure lard, four ounces; benzoic acid, twenty grains; otto of roses four drops; to be carefully mixed without the aid of heat. The benzoic acid, in addition to its being a powerful antiseptic, possesses the property of allaying cutaneous irritation, a symptom often very distressing to scarlet fever patients. The otto of roses gives an agreeable odour to the preparation.

I now also prescribe, throughout the whole course of the disease, a mixture composed of two or three drachms of ozonic ether in a half a pint of water; the dose ranging from a teaspoonful for a child twelve months old, to a tablespoonful for an adult, to be taken every second hour. This is used for the double purpose of benefitting the throat symptoms, and disinfecting the breath.

I have so much faith in the disinfecting properties of peroxide of hydrogen that I recommend all my friends and patients who are in a position to afford it to use freely, that which for want of a better name, I call oxygenated perfumery. It is made by adding ozonic ether, in the proportion of about a drachm to the ounce, to any kind of perfume, according to individual taste. I give the preference either to Rimmel's toilet vinegar or eau de Cologne. Letters, newspapers, and articles of clothing may be disinfected by sprinkling them over with oxygenated eau de Cologne, or with any other oxygenated perfume.

With regard to any power that peroxide of hydrogen may

possess of destroying the poison germs of small-pox, I must confess myself to be merely a theorist, for we have not yet had small-pox in its epidemic form in Australia. In 1871 a vessel arrived at Melbourne with small-pox on board, and shortly after the passengers were landed a few cases broke out in different parts of the colony; but through the energetic measures adopted by Dr. McCrea, our Chief Medical officer, the disease was soon stamped out. At that time, however, it first occurred to me that it might be possible, by a process of oxidation to destroy the poison-germs of small-pox as rapidly as they are given off from the body, and in a paper "On a Means of Arresting the Spread of Small-pox," read before the Medical Society of Victoria, July, 1871, I suggested the use of peroxide of hydrogen for that purpose.

From a theoretical point of view it might be supposed that peroxide of hydrogen would act more powerfully as a disinfectant in small-pox than in scarlet-fever, in consequence of the curious property that pus cells possess of exalting its chemical activity and giving it the oxidising powers of ozone.—Geelong Australia.—*Medical Times and Gazette.*

Diet and Exercise.—It has been for some time a subject of dispute among physiologists whether muscular force is produced by the oxidation or combustion of the muscular substance itself, or whether the muscular tissue merely serves as, so to speak, a sort of furnace where the alimentary matters are burnt or oxidised, and thus produce force. The bearing of the question on the subject of diet is evident. If during exercise the muscular tissue undergoes rapid destruction, it is plain that the food most suitable for ingestion during prolonged muscular effort is that whose composition is as nearly as possible identical with that of the muscles—*i. e.*, the food should be largely nitrogenous. If, on the other hand, the muscles are not themselves used up, but only serve as the site of other tissue changes, which other tissue changes are the source of the force set free in this case, it is equally evident that the food need not necessarily be

nitrogenous, but may be of any nature adequate to go through the metamorphoses required; *i. e.*, it may be non-nitrogenous, and be chiefly composed of hydro-carbonaceous substances. If the muscular tissue is disintegrated, the nitrogen contained in it must be eliminated in some form or other; for modern physiology teaches that waste matters are not allowed to remain in the organism, but are given off through some channel. The only channels through which it can pass are the skin, lungs, alimentary canal, and kidneys. It does not appear that any appreciable amount passes out by the skin and lungs. That passing out through the intestinal canal is derived from the unabsorbed intestinal juices and undigested food; it has, therefore, no relation to tissue destruction. The urine is, therefore, the only channel "through which the exit of nitrogen arising from the metamorphosis of nitrogenous matter can take place." Most of the nitrogen in the urine is in the form of urea, and the way in which experimenters have endeavored to settle the question is by measuring the amount of urea contained in the urine passed during rest and exercise respectively. Fick and Wislicenus were, we believe, the first to make satisfactory experiments on the subject. "They ascended, fasting, one of the high mountains of the Bernese Alps, measuring carefully the quantity of urea eliminated by the kidneys during and after the ascent. In the case of one of them, the labour developed by this ascent may be represented by 184,287 kilogrammètres; yet no increase in the urea was observed, either during or after this very severe muscular exercise. We see, thus, that the muscle (as the source of labour or heat) consumes only hydrocarbons and fats, and not albuminoids" (*a*) Voit, Drs. E. Smith, Parkes, and Austin Flint, jun., have also experimented on the subject; and all, except the last-mentioned experimenter, have arrived at conclusions substantially the same as those arrived at by Fick and Wislicenus. Dr. Pavy has recently published in the *Lancet* (Nov. 25th, Dec. 16th, Dec. 23rd, and Jan. 13th,) the results of the investigations made by him on Weston and Perkins, during their pedestrian performances at the Agricultural Hall. His conclusions may be briefly summarised as follows:—

1. Dr. Pavy found that in every case the amount of urea (and hence of nitrogen) eliminated during the days of working greatly exceeded that during the days of rest, the amount being nearly doubled.

2. The nitrogen ingested he also found to be greater, though not to such an extent, during the days of walking and during those of rest. Putting these two things together, Dr. Pavy says :—

"The average daily excess in the nitrogen eliminated, during walking, as compared with that eliminated during rest, is 222.54 grains." He says it is evident that we have an increased alimentation of nitrogen to deal with during the days of walking which is not to be accounted for by the nitrogen ingested. We can only, therefore, refer this increase to the effect of the exercise ; but is it the result—is it the expression of the action which has given rise to the power evolved ? This is the question that presents itself for solution, and I will attempt to solve it by ascertaining whether the force liberated by the oxidation of muscular tissue corresponding with the nitrogen discharged is sufficient to account for the work performed."

We have not the space to give the method of calculation adopted by Dr. Pavy. (Those who wish for details may consult *Lancet*, December 16th.) He arrived, however, at the conclusion that the force obtainable from the nitrogenous matter disintegrated is totally inadequate to supply the power for the work done.

Dr. Pavy says :—

"I have been arguing as though the nitrogenous matter disintegrated represented muscular tissues oxidised. This however, is undoubtedly by no means the case. There can be no question, from what we know upon the subject, that a large, if not the chief portion of the urinary nitrogen eliminated is derived directly from the metamorphosis of the nitrogenous matter ingested without pasing through muscular tissue. Again, I have only taken into account the power expended in the mere act of getting over the distance walked. I have said nothing of the muscular power expended in maintaining the circulation and respiration and the movements of the body occurring during

walking, supplementary to those actually concerned in affecting passage over the ground. These must form an item of considerable significance in relation to the whole muscular action taking place, and serve to bring out more strikingly the conclusion suggested by the figures which have been furnished."

Hence he concludes that even allowing a large margin for error in calculation, it is utterly impossible that the force produced could have been produced by oxidation of muscular disease. Dr. Pavy says:—

"It is not, indeed, surprising, looking at the increased activity of the circulation and respiration, that there should be an increased metamorphosis of nitrogenous matter throughout the system, and therefore an increased wear and tear of the muscles as part of the general action occurring. The oxidation of nitrogenous matter, furnishes, it must be remembered, a source of force, for after the separation of its nitrogen as urea, an oxidisable residue remains; but this has no intrinsic association with the view which ascribes the source of muscular power to the direct oxidation of muscular tissue."

We may remark that Dr. Pavy says that Dr. Flint has adopted a wrong method of calculation, by which the results obtained appear widely different to Dr. Pavy. Dr. Pavy has, however, verified many of his determinations of urea by actual combustion analyses of the quantity of nitrogen. Dr. Pavy's results certainly appear trustworthy to us, while Dr. Flint's figures certainly offer a fair field for criticism, and his inaccuracy detracts considerably from any force his argument may have. —*Doctor*, March 1st.

Treatment of Hydrocele by Electricity.

Von Friedenthal has used electro-puncture in this affection with good results. He uses gold needles, and only sticks them under the skin (not into the sac of the testicle). The needle of the negative pole is put in the skin of the scrotum, and the positive somewhere in the neighborhood. He passes a current for three minutes and repeats the operation every second day. Five or six sittings are generally enough to produce complete absorption of the hydrocele. In some cases the hydrocele returned, in others it did not. The same thing occurs with the injection of iodine.—(No. 28. *Prager Med. Wochenschr.*).

The Night Cries and Night Startings of Children.—Caspari attributes them to frightful dreams. In children under a year old, and especially in delicate, anæmic children, they are associated with mild or severe convulsions. He uses as a specific, bromide of potassium, and according to the age gives 0.5 grmm. to 1.5 grmm. (gr. $7\frac{1}{2}$ to gr. $23\frac{1}{2}$) a day. (Gr. xxv. potass. bromid., aq. ℥iss—ℑi 4 times a day).

According to Edlefsen's experience bromide of potassium always causes quiet and peaceful sleep in young children, but does not act so well in older ones. It acts well in convulsions, teething and meningitis. He gives a strong six months old child 0.5 grmm. ($7\frac{1}{2}$ grains) 3 or 4 times in the day, or once or twice in the evening. Younger and less robust ones, he gives 0.25 grmm. as a dose. In older children he often increases the dose to 0.75 grmm. several times a day.

(Deutsche. Ztsch. f. Prakt. Med 28. p. 234, 1876, und *a.a.* 0.38, p. 412, v. Dr. Edlefsen in Kiel.) Quotod in *Schmidt's Jahrbücher*, Bd. 172. No. 11, 1876.

On a new Treatment in Post Partum Hæmorrhage.—Although not an obstetric practitioner, I have recently been consulted in two cases of severe *post-partum* hæmorrhage. In both cases every means had been adopted but unavailingly. It flashed across my mind in the first case to try the effect of the ether-spray, and accordingly I directed a large spray over the abdominal walls, along the spine and over the genitals ; the uterus at once responded, and the cessation of the hæmorrhage was almost immediate. In the second case I lost no time in adopting a similar treatment, and with an equally successful result. I have consulted several eminent obstetric practitioners in Dublin, and am informed by them that they are not aware that this treatment has been heretofore proposed. The advantages of the ether-spray over the application of cold water and the other means usually adopted in these cases must be patent to every practitioner of midwifery.—By *W. Handsel Griffiths, PH.D., L.R.C.P.E.*

CANADA

Medical and Surgical Journal.

MONTREAL, APRIL, 1877.

RECOGNITION OF CANADIAN DIPLOMAS.

We have received the following letter from Sir Hugh Allan in reference to the subject of the recognition of Canadian qualifications for the emigration and passenger service on board of British ships:—

ALLAN LINE OF ROYAL MAIL STEAMSHIPS,
HUGH & ANDREW ALLAN,
AGENTS.

Sir Hugh Allan.
Andrew Allan.

MONTREAL, 16th March, 1877.

DEAR DR. FENWICK,—Our Liverpool letter to day advises us that the Board of Trade have rescinded the regulation respecting Canadian surgeons, who are now at liberty to sign articles on their own diplomas.

I congratulate you on the successful result of the opposition made to it.

Yours truly,

HUGH ALLAN.

Dr. FENWICK, Editor
Canada Medical and Surgical Journal,
Montreal.

This is gratifying so far as it goes. Nevertheless the position must be regarded as unsatisfactory. Canadian surgeons, by this action of the Board of Trade, are permitted to serve in their professional capacity through sufferance and not by right. It is an admission—a permit—on the part of the Board of Trade, but not, by any means, a recognition of the qualifications of the holders of Canadian diplomas.

The London *Lancet* of March 3rd, in alluding to an article which we published in the February number of our periodical, remarks:—"The *Medical and Surgical Journal*, published in "the Dominion, in its issue for February, deals at considerable "length with the ineligibility of surgeons other than those

" possessing British qualifications for appointments on board " emigrant and passenger ships sailing from British ports. It " strives, and we think successfully, to show that the educa- " tional tests by which admission is gained to the profession are " as comprehensive and exacting in Canada as those imposed " in England ; and submits that Canadian surgeons holding " qualifications equivalent to those conferred at home should " not be excluded from serving on board vessels which are " identified with the progress, enterprise and wealth of the " colony. * * * We believe that the Canadian Govern- " ment will be asked to make a representation on the matter."

We hope that this subject will receive careful consideration and be settled definitely. We have not heard that the Canadian Government has been requested to make any representation. It is very desirable that some explanation should be entered into and some definite line of action decided upon. The matter cannot be allowed to rest in its present shape. If Canadian graduates are admitted through sufferance, at any moment the Executive of the Board of Trade may enforce the wording of the act in respect to qualification to be demanded of ship's surgeons, and we shall on some future day have the grievance of which we complain repeated.

ENORMOUS ABDOMINAL TUMOUR.

At a meeting of the Medico-Chirurgical Society of Montreal, held March 9th, Dr. Osler exhibited for Dr. Malloch, of Hamilton, a solid abdominal tumour weighing 35 lbs. The following history accompanied the specimen:—" The subject of the disease was a gentleman, aged 47. When first examined, 14 months before his death, a hard nodular tumour, about the size of a fœtal head, was noticed on the right side of the abdomen. This had been growing for three or four months, causing irritability of the bladder and pain in the right thigh. It was considered malignant, and the advice was to leave it alone. Subsequently he consulted the leading physicians in Toronto, Montreal and New York, and finally fell into the hands of the

quacks. At the autopsy the body was extremely emaciated and the abdomen greatly distended, the lower ribs being pushed out. It was found to be attached to the abdominal wall in front, to the omentum and to one or two coils of the intestines, which were pushed upwards and to the left. It had an investing membrane (the stretched peritoneum), and was very easily turned out of the abdomen. It appeared to spring from the neighborhood of the right sacro-iliac synchondrosis, and the external iliac artery and ureter of that side were attached to it below. Secondary nodules existed in the vertebral column, the liver, and right lung." The tumour is divided by a number of deep fissures into tobules; it is white in colour; of good consistence. Histologically it is composed of elongated fibre cells, and, from their general arrangement, it would appear that their growth, though originating in the retro-peritoneal glands, belongs to the group of encephaloid cancers rather than the lympho-sarcomas, which more commonly attack the lymphatic glands. The term "Lobstein's Retro-peritoneal Cancer" has been applied to tumours arising from the glands in this situation.

ANNUAL CONVOCATION OF McGILL UNIVERSITY.

The Annual Convocation of McGill University for conferring degrees in the Faculties of Medicine and Surgery, and Law, was held in the William Molson Hall of the University on Wednesday, the 28th March, 1877.

There was a large assemblage of the friends of the University present. Shortly after three o'clock the members of the Convocation, who had assembled in tho Library, entered the hall and took their seats. The chair was taken by Peter Redpath, Esq., the senior governor present, in the absence of the Chancellor of the University.

The proceedings were commenced by the customary prayer by the Rev. Professor Murray, after which the Secretary, W. C. Baynes, Esq., B.A., read the minutes of the last meeting of Convocation.

The President asked Geo. W. Campbell, A.M., M.D., Dean of the Faculty of Medicine, to read the report of the Faculty.

Dr. Campbell alluded to the action of the English Board of Trade in relation to surgeons holding certificates from McGill, being refused the right to practice on board of certain vessels, and was happy to know that the order had been rescinded. He was warm in his thanks to other universities, Sir Hugh Allan, the press and the Government for the warm interest manifested in the University's behalf, and having again expressed himself glad that the order of the Board of Trade had been rescinded, and sensible of the compliment paid to the University by those who had defended it, asked Dr. Scott to read the report of the result of the year's labour.

The following report of the Faculty of Medicine was read by Dr Scott:

The following gentlemen, 27 in number, have passed their primary examinations on the following subjects: Anatomy and Physiology, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine and Botany and Zoology, their names of residences are as follows:

Names.	*Residences.*
Becksted, Morris	Grantly, O.
Bell, Robert	Montreal, Q.
Cameron, John D.	Glengary, O.
Chisholm, Alexander	Lochiel, O.
Fraser, John R.	Hawkesbury, O.
Gardner, Henry H.	Orillia, O.
Gibson, William B	Dunham, Q.
Greenwood, Fred. S.	St. Catherines, O.
Guerin, James F.	Montreal, Q.
Hutchinson, John A.	Bluevale, O.
Howey, William H.	Delhi, O.
Irwin, John L.	Ottawa, O.
McCann, John J., B.A.	Millbury, Mass.
McCrimmon, John.	Woodville, O.
McKinley, John K.	Perth, O.
McNeill, Ernest	Montague, P.E.I.
Mills, Thomas W., M.A.	Hamilton, O.
Neilson, William J.	Perth, O.
Pinsoneault, Bernard	Montreal, Q.
Riley, Oscar H.	Franklin, Vt.
Rutherford, Martin C.	Waddington, N.Y.
Setree, Edward W.	Prescott, O.
Smith, Daniel F.	Listowell, O.
Stafford, Frederick J.	Montreal, Q.
Vineberg, Hiram N.	Montreal, Q.
Webster, Arthur D.	Kentville, N.S.
Wright, John W., B.A.	Cressy, O.

The following gentlemen passed in everything but the Institutes of Medicine: Kirk, George W., Cornwall, O.; McCrimmon, Milton, Ancaster, O.; Macdonald, Malcolm C., Glencoe, O.

The following gentleman, 19 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from this University. These exercises consist in examinations both written and oral on the following subjects: Principles and Practice of Surgery, Theory and Practice of Medicine, Obstetrics, and Diseases of Women and Children, Medical Jurisprudence and Hygiene, — and also Clinical Examinations in Medicine and Surgery conducted at the bedside in the Hospital.

NAME.	RESIDENCE.	THESES.
Armstrong, George E.	Montreal, Q.	Hospital Reports.
Bell, James	North Gower, O.	Pathological Reports.
Boyle, Albert	Charlottetown, P. E. I.	Surgical Reports.
Brodie, John	North Georgetown, Q.	Hospital Reports.
Burland, Samuel C.	Philadelphia, U.S.A.	Acute Bronchitis.
Cannon, Gilbert	Almonte, O.	Pleurisy.
Cameron, Duncan H.	Perth, O.	Tubular Nephritis.
Cotton, Coderic L.	Cowansville, Q.	Hospital Reports.
Farley, James F.	St. Thomas, O.	Bloodless Operations.
Fraser, Alexander C.	Wallaceburg, O.	Malaria.
Gillis, John A. F.	Summerside, P.E.I.	Hospital Reports.
Greaves, Henry C.	Barbadoes, W. I.	Hydrophobia.
Jamieson, Alex. B.A.	Lancaster, O.	The Mind and the Nervous System.
Lane, John A.	Prescott, O.	Surgical Cases.
Law, William K.	Richibucto, N.B.	Typhoid Fever.
Miner, Frank L.	Abercorn, O.	Placenta Prævia.
Oakley, William D.	Plattsville, O.	Urinary Deposits.
Park, George A.	St. Marthé, Q.	Sanitary Science.
Smellie, Thos. S.T., M.A.	Fergus, O.	Pathological Reports.

Students who have passed their examinations in Botany:

CLASS I.

G. Dibble, (1st Prize)	T. L. Brown,	R. T. Maas,
L. Mignault, (2nd Prize)	H. B. Small,	H. E. Poole,
D. T. Inksetter,	B. L. Riordan,	T. C. McArthur,
W. McEachran,	James Calahan,	G. T. Ross,
W. K. Dulmage,	S. M. Lefevre,	T. Gray,
		W. R. Prime.

CLASS II.

G. C. Brown, A. C. K. McCorkill,	q.	G. H. Groves,
A. Ruttan,		F. W. Pulford,
D. K. Crowley,		T. O. Steward,
G. C. Hart,		E. H. Smith,
T. J. Church,		M. F. Prime,
F. W. Church,		W. De Moulpied,
R. T. E. MacDonald,		A. K. Teller.

CLASS III.

M. McNulty,	W. T. Musgrove,
C. T. Glass,	T. W. Serviss,
G. H. Snider,	S. D. Holcomb,
W. C. McGillis,	E. A. McGannon.

The Medical Faculty Prizes are three in number:

1st. The Holmes Gold Medal, awarded to the graduate who received the highest aggregate number of marks for the best examinations, written and oral, in both Primary and Final branches as also for an inaugural thesis.

2nd. A prize in books awarded for the best examination, written and oral, in the final branches. The gold medallist is not permitted to compete for this prize.

3rd. A prize in books awarded for the best examination, written and oral, in the primary branches.

The Holmes Gold Medal was awarded to James Bell, North Gower, O.

The prize for the final examination was awarded to William Donald Oakley, Plattsville, O.

The prize for the primary examination was awarded to Hiram N. Vineberg, Montreal, Q.

The following gentlemen arranged in the order of merit, deserve honourable mention :—In the final examination, Messrs. Cotton, Armstrong, Fraser, Gillis and Brodie.

In the primary examination Messrs. Neilson, Gibson, Mills, Smith and Greenwood.

Professors Prizes.

Practical Chemistry - - - - - -

Botany - - - - - - - - Dibble and Mignault.

Practical Anatomy.

Demonstrator's Prize in the Senior Class, awarded to John Andrew MacDonald and Thomas W. Mills, M.A., equal.

Those deserving honourable mention for care and assiduity,

Brown, Hart, Lawford, McCrimmon, equal, and Stevenson, and Webster.

Junior Class prize awarded to Thomas Gray. Honourable mention, Messrs. McArthur, Gurd, Inksetter, Small and Groves.

The graduates were then called forward and the *Sponsio Academica* was administered by Professor Craik, M.D., and each in turn presented to Vice Chancellor Dawson, who performed the ceremony of Capping, and delivered to each candidate his diploma of Doctor of Medicine and Master in Surgery.

At the conclusion of this ceremony Dr. Smellie delivered a valedictory address on behalf of his associate graduates. Dr. Gardner, Professor of Medical Jurisprudence, then addressed the graduating class on behalf of the Medical Faculty.

After the proceedings of the Faculty of Law, and an address from Sir Francis Hincks, the benediction was pronounced by the Rev. Professor Murray, and the convocation adjourned.

Obituary.

JAMES HAMILTON, L.R.C.S. Edin.

We regret to have to record the death, on the 1st of last month, of one of the oldest and one of the best known medical men in the Dominion, Dr. James Hamilton, of West Flamboro', Ont. He was born at the village of Douglass, in Lanarkshire, in 1797. Receiving a preliminary education at the parish school, he proceeded to Edinburgh as a medical student, and, after four years study, obtained, at the early age of 19, the diploma of the College of Surgeons, the date of which is 1816. Thus qualified, and being anxious to see something of the world, he came to Canada as surgeon on a vessel, and was induced by friends to begin practice in Montreal. After enjoying himself for four months, and doing, as he told the writer, very little practice, he returned to Scotland. In 1818 he again visited Canada with the intention of permanently settling, and after visiting many localities, began practice in Ancaster, a small village about 5 miles from the head of Lake Ontario, and, at that time, the chief place of business

between York (Toronto) and Niagara. Here, as the only medical man at the head of the lake, he quickly obtained an extensive practice, so extensive, indeed, that the greater part of the day was spent in the saddle. His district at that time lay between the Grand River and twenty miles down the lake on either side, an area about 60 miles by 20. In 1820 he moved across the valley to West Flamboro', about two miles from Ancaster, having purchased one of the most beautiful sites in Western Canada, immediately above the town of Dundas, and overlooking Burlington Bay and Lake Ontario. Here he continued to live until the time of his death. Dr. Hamilton possessed qualities of mind and body which fitted him in the highest degree for his profession, while the strict and conscientious attention which he paid to all cases, early secured for him a lucrative practice. Unfortunately in later years he engaged in some commercial enterprises which proved far from successful, but an indomitable energy enabled him not only to tide over reverses, but to make provision for old age. In all public matters Dr. Hamilton took a deep interest, but had no great desire for parliamentary honours. Though a staunch conservative and a leading man of his party, he was only once induced to contest a county, and then unsuccessfully. He was one of the original promoters of the Great Western Railway, of which he was for many years a Director, latterly holding the position of consulting Surgeon. At the time of the Rebellion he held a commission as Colonal of Militia, and took an active part in its suppression. By his professional brethren Dr. Hamilton was held in the highest esteem, and most deservedly so, for one by one he had welcomed them heartily into his district, holding out to each the hand of good-fellowship. He took a deep interest in the Ontario Medical Council, and represented the Burlington and Home districts from 1869 to 1872. It is much to be regretted that Dr. Hamilton has left us no record of his medical experiences, which, extending as they did over a period of sixty years, would have formed a most valuable contribution to canadian medicine. To the end he maintained an interest in the progress of the art, and frequently, in conversation, would refer

to the great improvements in medicine and surgery. Possessed of an accurate memory stored with interesting incidents both medical and social, he was a most delightful companion, and will greatly be missed at friendly gatherings in Wentworth. To within a year ago, Dr. Hamilton enjoyed an unusual measure of health, indeed in his long career, he was only once laid up by illness. From his boyhood he was a most enthusiastic curler, and had been for some time past President of the Ontario branch of the Royal Caledonian club. For nearly a year before his death symptoms of declining vigor were apparent to his friends, and signs of grave disease of the heart were discovered. The death last year of his son, Dr. Andrew Hamilton, of Melbourne, Que., was felt very keenly by him, and he never fully recovered from the fatigue of a hurried railway journey undertaken at the time. To the end, however, he was cheerful and resigned, though loth to depart, and on Christmas day, when the writer of the present sketch saw him for the last time, and on leaving spoke of his long and honorable career, he replied that nothing would please him better than to exchange his rusty old body for a young and active one, and work on for another eighty years.

Award to Messrs. Billings, Clapp & Co., Boston.

The undersigned, having examined the products herein described, respectfully recommends the same to the United States Centennial Commission for award, for the following reasons, namely :—

A very fine display of Chemicals, especially Carbolic Acid, Propylamine, [Trimethylamine], Chloride of Propylamine, and also of Pharmaceutical Chemicals, such as Citrates of Iron and Manganese, Citrates of Bismuth and Ammonium, Pyrophosphate of Iron, Bromide of Potassium, Bromide of Ammonium, Chromic Acid, Valerianic Acid, and many others. Commended for fine display and *excellence* of chemicals.

F. A. Genth,
[Signature of the Judge.]

Approval of Group of Judges.

J. Lawrence Smith, Dr. V. Wagner,
P. De Wilde, Charles A. Joy,
E. Patterno, J. W. Mallet,
F. Kuhlmann.

CANADA
MEDICAL & SURGICAL JOURNAL

Original Communications.

ULCERATION AND STRICTURE OF THE RECTUM,

WITH REPORT OF

TWO CASES IN WHICH COLOTOMY WAS PERFORMED.

By Geo. E. Fenwick, M.D.,

Professor of Surgery, McGill University.

Ulceration of the verge of the anus, or fissure of the anus, is a most distressing malady; it is, however, very amenable to treatment and will yield to appropriate measures. Ulceration, extending above the internal sphincter, is by no means so frequently seen, at least I speak from my own experience in this matter, as I have met with fissure of the anus frequently, whereas cases of ulceration extending up the bowel have been comparatively rare. Ulceration of the mucous membrane of the rectum situated above the sphincter is a very serious malady. It is slow and insidious in its advance, capable of relief in its early stage, seldom, however, recognized as such until the local alteration of the parts, that takes place as the disease progresses, produces such a condition as to preclude all hope of relief, except by operative interference.

In the early stage of the disease, the treatment by local applications will occasionally be successful, but it is generally tedious and prolonged, and too often the patient will neglect to carry out instructions, or he will abandon all further attention

to his malady and allow it to take its course. The folly of neglect in these cases cannot be too seriously condemned. We must bear in mind that occasionally in the early stage of this malady, the suffering and uneasiness is not marked, not sufficient to attract the attention of the patient. He certainly suffers some discomfort, but he often neglects to consult his surgeon, or if he does so he may state, that he has an attack of piles, and ask for some remedy. This, however, fails to give relief, in due time he resorts to various nostrums which he sees freely advertised as infallible cures, such as pile ointment, or pile liniment, but these are equally ineffectual in curing his malady.

It is very important to success in the treatment of ulceration of the rectum that an early and correct diagnosis should be made. It is alone by careful inspection of the part that a correct knowledge of its condition can be ascertained. The symptoms at the outset are obscure. In some cases the bowels are irritable. The patient may believe that he is suffering from dysentery. As soon as he leaves his bed in the morning he experiences an urgent desire to go to stool, at the time he passes some wind, a small quantity of fluid fæces, mucus or pus, or the evacuation may resemble the white of egg, or it may be dark or grumous, and has been compared to coffee grounds. This latter colour is due to altered blood which has been poured out by the ulcerated surface, and has lain in the bowel over night. The discharge is attended with some tenesmus,and a sense of heat and burning about the lower part of the bowel. The relief after going to stool is but slight, there continues an uncomfortable fulness as though there remained behind something that the patient was unable to get rid of. The pain and discomfort soon subside, but a hot breakfast will bring on a further desire to go to stool, which will be more natural in consistence, and more abundant, still the patient does not pass a healthy-formed stool, but lumpy and sometimes smeared with blood, towards the end of defecation a little fluid fæces or mucus or pus will be discharged, and again will he suffer from tenesmus, which sometimes is very distressing. Cases of this kind are constantly treated as those of

ordinary diarrhœa, and very often an opiate or a dose of castor oil with opium will relieve the symptoms of distress, but if ulceration be present these remedies will not be curative.

If the disease progresses unchecked, after a time, the patient will suffer pain after each stool, this is usually of a dull, throbbing character, the straining and tenesmus is increased, a constant fulness in the rectum is experienced, and the discharges of pus or mucus mixed with blood become more abundant and more frequent. It will also be noticed by the patient that whereas he was formerly able to go about his usual avocations with comparative comfort, walking or standing will increase the distress. As the case advances other symptoms will become apparent. The bowels will be more irritable so that the patient may have frequent calls to evacuate their contents. Each time he goes to stool the evacuation will be unsatisfactory and will be followed by tenesmus. He becomes dyspeptic, cannot eat his food, from failure of the appetite, his sleep is not refreshing, his rest at night being disturbed by pain of a shooting character in the bowel or most intolerable itching about the anus, he also experiences reflex lumbar pains, and pains down the thighs and legs. As the disease advances the ulceration will extend up the bowel, sometimes reaching to the sigmoid flexure. Thickening of the submucous tissue and muscular coat occurs, and contraction of the lower portion of the gut ensues from partial healing or cicatrisation of the ulcers. The bowel loses its contractile power, and a state of stricture of the gut at the point of cicatrisation results. In this state fluid fæces will come away spontaneously, because the sphincter loses much of its power to retain the contents of the rectum. Solid masses remain in the rectum unless washed away by enemata, or until forced through by fresh accumulations from above.

In some instances the passage of the fæces over the ulcerated surface will occasion griping pain with a sensation of faintness or actual vomiting. When stricture is actually present the patient will experience an uncomfortable fulness about the bowels, this being the distension accompanying constipation, in a day or two he will have an attack of diarrhœa, and will pass

a large quantity of fæces, with much distress, and sometimes sickness at the stomach, with severe colic. To add to his misery abscesses will form in the perineum, or about the anus, and will terminate in the formation of fistulæ.

Digital examination will reveal the condition of the part. The surface of the mucous membrane will be found uneven, and the edges of the ulcer can be felt distinctly raised. Considerable tenderness will be experienced, or actual pain with a feeling of faintness as the finger is passed over the ulcerated surface, and on withdrawal of the finger it will be found smeared with blood, or a certain quantity of blood and mucus may be expelled with the finger. The ulcerated surface in some cases, feels as though it was excavated and the edges will be raised and somewhat hard. The ulceration is somewhat circular, rarely solitary, and in advanced cases will pass up the bowel beyond the reach of the finger. The surgeon should not be content with a digital examination, but to render more certain his diagnosis he should examine with the speculum. This is sometimes a painful proceeding, necessitating the use of an anæsthetic. On passing up the instrument, even when the greatest care and gentleness are practiced, if an ulcerated surface is met with hæmorrhage will follow and the instrument will become filled with blood which soon coagulates. This must be removed before a satisfactory inspection of the mucous membrane can be obtained. The best method of removing the clot is by a continuous stream of cold water, which is preferable to the swab. If the surface of the ulcer is very vascular, and continues to bleed, a piece of ice introduced into the speculum will be sufficent to arrest it, and a fair view of the surface of the ulcer can readily be obtained. The mucous membrane around the ulcerated patch is usually healthy in appearance, but sometimes it is quite nodular, thickened and irregular, the ulcer itself feeling deep and excavated. This latter condition is alone seen in advanced cases. The speculum will reveal the ulcerated surface with distinctness, the edges sometimes raised, sometimes they appear undermined as though the connective tissue beneath was being destroyed by the ulcerative process. Some writers describe the mucous membrane

curling up or rolling up like a scroll and producing polypoid projections, while the process of cicatrization goes on beneath. The surface of the ulcer is sometimes highly vascular, bleeding when touched, or it presents a greyish base.

Ulceration of the rectum is stated to be a result of obstinate constipation. This is not always so, as some persons, throughout life are habitually costive, without any ulceration following as a necessary consequence of that condition. The presence of foreign bodies, fish bones, and other extraneous matter, would be very likely to occasion abrasion of the epithelium and lead to ulceration of the mucous surface. Persons of a strumous habit are as liable to ulceration of this part as they are to the formation of abscess in other organs. Ulceration of the rectum is sometimes found in phthisical patients, and very many die from exhaustion with a very small amount of lung disease, not sufficient to account for the fatal issue.

A very common cause of ulceration of the rectum is constitutional syphilis. Syphilitic ulceration of the rectum has been observed to be more common in women that men, and is stated by some writers to be apparently due to extension of the disease from actual local infection. This may possibly be the case, but it is more likely to proceed from the softening of gummata in the submucous areolar tissue. Syphilis as a cause of ulceration and stricture of the rectum is questioned by some writers, notably, Dr. Erskine Mason,* of New York, who observes in the course of a valuable paper published by him in 1873 : That so-called syphilitic strictures of the rectum are in no wise due to syphilis, and he sugests that they are occasioned by the cicatrisation of chancroidal or non-infecting sores. We are not prepared to admit this as an absolute rule, nor do we believe that chancroid is a common cause of ulceration of the rectum. If such were the case, the termination of the disease would in all likelihood be speedily fatal. Our experience of chancroid in parts that are ever in use, is anything but encouraging, and in all likelihood death would result by perforation from rapid extension of the ulcerative

* American Journal of the Medical Sciences, January, 1873.

process. The arguments of Dr. Mason in favor of the theory he propounds are very plausible and fairly stated, but they do not convince us of the correctness of the views advanced. Syphilitic disease of the rectum has been sufficiently well authenticated. If syphilitic disease of the rectum occurs alone from actual contact, by the discharges of the vagina trickling over the anus and hence is alone seen in females, what becomes of the theory of the impossibility of inoculating syphilis in a syphilitic subject from matter taken from a primary sore already existing on that person. Syphilitic complaints in both sexes are sufficiently common, but it is not usually presumed that they proceed from the inoculation of syphilitic matter flowing from a syphilitic sore in some other part of the patient's body, and trickling over the part implicated. Syphilitic condylomata around the anus may lead to infection of the bowel, that it does so always, I think doubtful. But to assume that all cases of ulceration of the rectum and the consequent stricture from cicatrisation is due alone to non-infecting chancroid is, to my mind, equally erroneous. There can be little doubt that syphilis will affect the rectum as well as it will other organs of the body. Nor is there anything to be gained by advancing a theory respecting the non-syphilitic origin of stricture of the rectum. That all cases of stricture of the rectum are due to the cicatrisation of the syphilitic sores of that part we know is not the case, but it is equally illogical to affirm that all cases have for their starting point chancroidal or non-infecting sores. It would appear that the actual occurrence of syphilitic disease of the rectum in the male is doubted, but I can call to mind two cases in the male, both of whom were young men, and they both died of phthisis, apparently aggravated by the disease in the rectum. I have no doubt in my own mind that had colotomy been practised in those cases that they would have been very much benefited, and possibly their lives would have been prolonged.

In the two cases here reported the entire length of the rectum was ulcerated, the submucous tissue thickened, and the calibre of the gut diminished, defecation was excessively

painful, and entire relief an impossibility. The first case occurred in a female prostitute, an old syphilitic, who was admitted into the Montreal General Hospital in September 1873. There was a constant discharge of pus from the rectum, although the quantity was not very great, she suffered greatly from pain in defecation, the parts about the anus were sore and excoriated, but there were no condylomata. The stools passed were not formed. She complained of constant distressing diarrhœa, with griping pain in the lower part of the bowels and back. Sometimes the pain would extend down the thighs There was no vomiting but she complained of flatulent distension of the bowels. On several occasions perfect stoppage had taken place, and this was relieved by enemata which gave her great distress. At no time for months had she experienced a feeling of perfect relief after defecation. There was also a sense of fulness, although the amount of nutriment taken in the day was very small. On examination of the rectum several ulcerated patches with raised indurated edges could be felt, the finger could with difficulty be introduced into the rectum, and then only when the patient was under chloroform. The narrowing of the gut commenced just above the internal sphincter, which latter had lost much of its resiliency, and fluid and gas would pass from the bowel unrestrained. She was put under constitutional treatment, and various local applications, in suppositories with cocoa butter, were made. Very slight if any relief followed, and the pain and misery which the poor creature suffered, induced me to consider the advisability of performing colotomy. This I proposed to the patient, and she at once assented, and in consultation with the medical staff of the Hospital it was decided to perform the operation.

October 5th, 1873. The operation was performed in the usual method, adopting the oblique incision of Mr. Bryant, four inches in length, extending from the last rib in the direction of the anterior superior spine of the ilium. The structures were divided to the full length of the first incision on a director, layer by layer. On coming down to the quadratus lumborum muscle, a layer of fat was observed, at this instant the patient,

who was under chloroform, retched and the bowel was forced up through the wound, it was at once seized, transfixed in the usual way with curved needles, opened and the edges attached to the skin, the rest of the wound closed by metallic sutures, and the patient removed to bed. The bowel appeared empty at first but before removal from the operating table she passed a full motion. This woman recovered from the operation without a bad symptom. At the end of two or three weeks the ulceration in the rectum had very greatly improved, but as cicatrisation advanced the calibre of the lower part of the gut was much diminishsd. That portion of the bowel was washed out daily with a weak solution of carbolic acid. This contributed much to her comfort, and aided the healing of the sores. There was one condition in this woman, and which I deem was due to the size of the artificial opening. The bowel became prolapsed to the extent of several inches, so that it resembled a large sausage. The girl by working the abdominal muscles was enabled to draw in every part of the intestine, and would do so with remarkable rapidity, and as she affirmed without much pain. I endeavoured to remedy this condition by lessening the size of the opening but without success. The edge of the opening in the bowel towards its upper or most posterior part were pared with a knife and then brought together with sutures. This diminished the size of the opening, but it did not prevent the prolapsus. A well-fitting pad was made, but the patient was so wilful that she could not be made to wear it.

The second case was very similar in history and progress, but occurred in a much older woman. I am indebted to the House Surgeon J. D. Cline, B.A., M.D., for the following report:

Colotomy in left Loin; fatal from Peritonitis; Autopsy; Mesocolon found. By Dr. Fenwick. Reported by J. D. Cline, B.A., M.D., Assistant House-Surgeon, M.G.H.

Louise Pichet, æt. 48, was admitted into hospital on the 16th March, 1876. She was a stout, fair-haired French-Canadian woman. One was immediately struck by the anxious, distressed

expression of countenance, indicative of suffering, which she presented. She had been a woman of loose character, and had contracted syphilis about nine years ago, for which she had been treated. She had had ulceration about the lower part of the rectum, and for the last twelve months had suffered from obstruction. On examination her condition was as follows: There were a number of sinuses opening around the anus, at a distance of from one to three inches from it. The index finger could be introduced into the rectum only as far as the first joint, when it was met by a stricture, which would not admit more than a No. 12 urethral bougie. The stricture was cartilaginous in hardness. There were also a number of hard nodules around the sides and back of the vulva. Her history, which was known, left no doubt as to the nature of the ulceration and stricture. She had frequent desire to go to stool, as often as every hour, and each time suffered agony from straining that availed nothing, except occasionally, when she passed small masses of fæces very much flattened.

Dr. Fenwick decided that the only thing to be done was to perform colotomy, by way of alleviating her sufferings and ameliorating her condition, which conclusion was approved of by the rest of the medical staff. On March 25th the operation was performed under chloroform. The operation was Collisin's in the left loin, an oblique incision from the last rib to the crest of the ilium being used. The incision was about four inches long. The patient was very fat and the muscles well developed, so that the incision was about two inches deep. There was great difficulty in finding the gut, even after the intestines were distended with air by means of an enema syringe introduced into the rectum. An elastic œsophageal bougie was introduced also, but could not be felt through the wound. Several curved needles were introduced through what was imagined to be the gut till air began to escape, when an incision was made in the length of the gut between the needles, and the edges were attached to the edges of the external incision. The operation occupied a considerable time. At eight the same evening her temperature was 103°, and pulse 120 and weak. There was a good deal of tenderness in neighborhood of

the wound. Morphia gr. ¼ was given hypodermically. At midnight she was restless, perspiring very much, and her breathing was labored. The morphia was repeated. At four o'clock her distress had increased. The tenderness was general and distension of abdomen great, and breathing very heavy.

March 26th.—Temperature this morning 104°, pulse 124 hard and wiry, tongue dry and brown. The morphia gr. ¼ was repeated hypodermically every three hours, and milk, brandy and ice given freely. She had no vomiting. At 1 p.m. Dr. Fenwick ordered salicylic acid grs. v. every three hours. Temperature now 103°. At 4.30, temperature 101 3-5°, and pulse 136. At 6.45 p.m., temperature 100 2-5°. At 8.15, temperature 99 4-5°, and pulse 144. She died at 11 p.m., 32 hours after the operation.

AUTOPSY TWELVE HOURS AFTER DEATH.

The body was opened down the linea alba, and a transverse cut made through the abdominal walls down to the wound. The peritoneum presented no signs of inflammation except in the immediate neighbourhood of the wound and in the back part of the pelvis. In these two situations there was some pus, most in the pelvis, which had probably got there by gravitation to the lowest part. In this latter situation, however, there was a good deal of injection, which was not understood till later. An incision about 1½ inches long was found in the peritoneum in front of the gut. There were several adhesions between the omentum and the edges of the wound, which were evidently recent and easily torn. The incision into the colon was in the upper side of it, that is, directly opposite to its attachment. There was found also to be a mesocolon about 1½ inches long. After removing the gut from the anus up to the seat of operation, it was slit up. The constriction was formed by thickening and contraction of the walls, evidently by the cicatrization and contraction of old ulcers. Superficial ulceration extended up the rectum about four inches above the stricture. Six or seven internal openings of the sinuses were found, some above and some below the stricture. About eight inches above the stricture was found a perforation in the posterior wall of the gut,

just where it takes its first turn to the left. This had undoubtedly been made by the œsophageal bougie which had been introduced during the operation, and explained the signs of peritonitis in this situation.

There are several points of interest in this case which demand a passing reference. The operation was the same as that performed in the first case described, and the cause of the difficulty in finding the bowel was sufficiently apparent, viz, the presence of a long mesocolon. After the preliminary incisions and division of the transversalis fascia, a quantity of fat came into view. As the woman was well supplied with adipose tissue, this was to be expected. The lower edge of the kidney was felt distinctly; it was not, however, in the way, but, on grasping the mass of fat, nothing like the bowel was to be found. Under these circumstances the dissection was continued cautiously, but it was not until after the bowel had been distended with air that I found it necessary to open the peritoneum. I cannot say that I made out the presence of a mesocolon at the time of the operation. I was certainly under the impression that the dissection had been carried too far in front, as the edge of the quadratus muscle was not divided, as advised by Mr. Allingham, although its border was fully exposed. I do not think that division of the fibres of the quadratus lumborum muscle would have in any way facilitated the operation in this instance, because the bowel lay wholly in the sac of the peritoneum. The amount of the peritoneal inflammation at this point was not very considerable, not sufficient, I should say, to cause the unfortunate issue.

The perforation of the bowel which evidently occurred with the minimum of force used, took place at a point where the ulceration had extended deeply into the substance of the gut. The point of the bougie, which was a small elastic instrument, about the size of a number 10 catheter, had been arrested by the border of an ulcerated surface, which was somewhat raised and hard, and had evidently passed through at this point, very little force being used. Practically this teaches a lesson of caution, and illustrates how necessary it is for a surgeon in undertaking

an operation, to count the risks of each step in the proceeding, but further, it shows the serious risk incurred in trying to introduce a bougie high up into a bowel already in a diseased condition, the course of which, naturally tortuous, is rendered doubly so by the cicatrisations of old ulcers.

Another point connected with this case, one which struck me at the time of the autopsy, although it is not recorded by the gentleman reporting the case, was the flaccidity of the parts as a post mortem result. The stricture which in life was very tight, almost cartilaginous in feeling, was relaxed after death, and would have permitted the passage of the index finger with facility. This appearance is noticed by writers on the subject, who state that the condition after death in these cases has led to the supposition of error in diagnosis during life. Altogether this case is one of great interest, and the result, although disastrous, is no argument against the operation, indeed there can be no question of doubt about the relief obtained in these cases, but not only in organic stricture of the rectum with extending ulceration should colotomy be considered, but in malignant disease of the rectum, it is a positive duty. The agony and suffering of persons afflicted with cancer of the rectum is inconceivable, and the relief and comfort given to the patient must, at least, be gratifying to the surgeon.

Mr. Bryant, in his excellent treatise on the Practice of Surgery, in reference to this operation, remarks :—" I have in no single case ever regretted performing this operation, although I have in a large number wished that I had had an opportunity of performing it earlier, for in no instance in which I have undertaken it have I failed to give relief." This opinion I can fully endorse; in all the instances which have come under my own observation, relief has been marked. In cases of stricture of the rectum, or advanced cases of ulceration in malignant disease, or in obstruction of the lower bowel from the presence of tumours, the operation of colotomy is not only a relief to the patient, but, to my mind, it becomes a duty on the part of the surgeon which he should not neglect. Let any man peruse the cases reported by Allingham, Bryant and others, and he cannot but be convinced of the benefits of colotomy.

Reviews and Notices of Books.

A Treatise on the Theory and Practice of Medicine.—By JOHN SYER BRISTOWE, M.D., F.R.C.P., Physician to St. Thomas' Hospital, Joint Lecturer in the School and Examiner in Medicine to the Royal College of Surgeons, &c., &c. Edited with notes by James C. Hutchinson, M.D., Physician to the Pennsylvania Hospital, &c. 8vo. pp. 1089. Philadelphia: Henry C. Lea, 1876.

In considering the wide range of medicine, it does seem a difficult task to condense all that is essential to the student and junior practitioner into the limits of a single volume. Such, however, appears to have been done successfully by Dr. Bristowe in the work before us. He has discussed the various articles in this work without burthening them with details which may be essential to the scientific investigator, but which are more matters of interest than of practical utility. For information of this kind the student will have to turn to the ponderous tomes of an encyclopœdia, as it is quite beyond the capacity of a text book. But while stating that the work is not burthened with unnecessary detail, we should regret to leave the impression that it is in any way deficient in the essentials. The author remarks in his preface, "in discussing each disease my aim has been to give in a readable form as much information as I could include within a limited space." This, we think, he has done, and done well.

The work will be found to be particularly full in pathological description, and also in giving an account of the clinical phenomena of disease. Special prominence has been accorded to these and wherever clinical phenomena appear to be the direct consequence of some local lesion, the pathological description is placed before the clinical, so that cause and effect may be associated in the mind of the student. Differential diagnosis is not specially a feature of this work, and the author remarks on this head that it may possibly seem an omission, but one that he does not regret," for the distinguishing of one disease from

another disease should depend, not on the simple recognition of a few leading characteristics, which, however carefully selected are apt not unfrequently to fail us, but on a *bonâ fide* and thorough acquaintance with the collective phenomena of diseases," and he very correctly adds, "The more a student is taught to rely on one or two criteria, the less likely is he to investigate diseases intelligently, and the more apt is he to be content with hasty and inaccurate diagnoses."

In regard to that portion of the work devoted to treatment of disease, the author does not indulge in minute directions concerning the combination of drugs or their appropriate dose, he believes "that works upon the materia medica are the proper source from which to learn the doses in which medicines may be administered, and the best modes of combining medicines," nevertheless, he points out the specific virtues of certain drugs and their adaptability to certain diseases, and he argues that a medical man is far more likely to be a successful practitioner, if he adapts his drugs and methods of treatment to the exigencies of each case rather than become a servile follower of some predecessor. With a view to economizing space the author has omitted the report of cases in illustration of the subjects under discussion. This he regrets, as without doubt it gives a vigor and impressiveness to the subject and robs it of dry detail, It is this very quotation of cases in illustration which adds to the instructiveness and prominent interest found in the works of Watson, Trousseau and others. The well-told history of a case which has come under the notice of a writer must in every way be instructive and interesting.

The work is divided into two parts; in the first is considered general pathology. There is given the definition of disease, its ætiology, the physiological processes in health and in disease, and the treatment of disease, hygienic prophylatic and therapeutic; this is condensed into 130 pages. In the second part there is considered nearly all the diseases which properly belong to medicine, and some which might, we think, with propriety, have been omitted, as for instance diseases of the skin. There are certain affections of the derma which properly belong to the department of the surgeon. It may be a difficult matter to

separate the true surgical affections from the medical in a systematic book devoted to these diseases, but we think in a work on medicine, professing to be a text-book it is occupying space which might be filled more advantageously with other material. The work is designed as a text-book for students and junior practitioners, and it certainly fulfils its mission. On reference it will be found to contain a most faithful record of the present condition of medicine, both as regards diagnosis and treatment of disease. To all we can commend this work as being replete with valuable practical information, concise without being meagre in detail. The publisher has done his work well, and in the usual style of excellence.

Lectures on Orthopædic Surgery and Diseases of the Joints.— Delivered at Bellevue Hospital Medical College, during the winter Session of 1874–75. By Louis A. Sayre, M.D., Professor of Orthopædic Surgery, and Clinical Surgery in the Bellevue Hospital Medical College, &c., &c., illustrated by 274 engravings. 8 vo. pp. 476.— New York, D. Appleton & Co., 549 & 551, Broadway. 1876.

Dr. Lewis A. Sayre of New York, has for years past devoted his time and attention to diseases of joints, and has acquired a world-wide reputation in the treatment of those affections. It is not surprising, therefore, that a work setting forth his peculiar views, both of the pathology and treatment of joint diseases, should have been looked forward to with interest by surgeons generally. Nor do we think that disappointment has in any way attended its appearance. Some of the author's views may be at variance with those enunciated by other authorities, but it must be admitted on all sides, that his theories are plausible if not convincing, his resources unlimited, and his successes in treatment more than remarkable. The work before us may possess some defects and peculiarities of style, we must state, however, that the text is taken from a short-hand report of Lectures delivered by the author *extempore* at the clinique of Bellevue Hospital. Many of these lectures were given without previous preparation,

being observations on clinical cases presented to him for the first time. The author remarks: "Upon its perusal in the proof I find many expressions which I would like to change, but as these lectures were delivered extemporaneously, and without preparation, I find it difficult to alter the text without destroying its originality." The author explains in his preface that although urged by medical gentlemen of the highest standing at home and abroad to publish his peculiar views in book-form, he hesitated to do so, as many of his opinions were directly at variance with those of standard authorities; therefore he delayed, until a larger experience confirmed his observations or proved them to be erroneous.

These lectures being clinical, there are laid before us the cases which were seen by the class, and which form the basis of the course. but besides we have repeated here other cases in addition, taken from the author's note book, and from hospital records, and used to illustrate some principle under discussion. Some of the cases here alluded to have already been published by the author in medical journals, or have been read by him before different medical societies, and they are fittingly repeated as being typical of some principle laid down.

The work consists of twenty-nine lectures. In the first lecture he gives a sketch of the history of orthopædic surgery, the reasons why a student should make this a subject of special study, and he terminates by giving a general plan of instruction which the purposes to follow throughout the course. From lectures two to six, inclusive, he dwells on deformities of the feet, devoting three lectures to the subject of treatment. This the author divides into operative measures, division of tendons, mechanical appliances, and manipulation. This latter he maintians is of paramount importance to success, and he remarks without "manipulation, giving the foot a variety of active movements, the result obtained by the operation, and fixing the foot in some immovable apparatus, is exactly what may be seen everywhere around us," and he points out that when manipulation is neglected failure must follow. Mechanical appliances

are necessary, but these should be frequently removed, and free manipulation practised. The stimulus of motion is quite as essential to success, as is tenotomy and mechanical restraint.

The ensuing five lectures are devoted to the subject of the different varieties of talipes, and their treatment. In lecture xii we have some excellent remarks on the importance of giving attention and care, with a view to their relief, of some minor deformities, such as corns, bunions, ingrowing toe-nail, &c., and he very properly remarks that "our business as surgeons, is to relieve human suffering if possible, no matter whether it comes from a corn or a cancer." In the next ten lectures, the diseases of joints are described, the author confining his remarks to the affection of the joints of the inferior extremity. In lecture twenty-four the author considers those diseases which simulate hip-disease, such as sacro-iliac disease, caries of the ilium, caries of ischium, periostitis of parts about the joints, psoas abscess, inguinal abscess, congenital malformation of the pelvis, paralysis of the lower extremity and injuries, including diastasis of the head of the femur, fractures and dislocations. Diseases of the spine occupy the next two lectures, and the concluding chapters are on anchylosis, and on some deformities, not described in previous lectures: such as torticollis disease of the wrist joint, wrist-drop, &c.

In regard to the origin of joint affections the author holds, that direct injury is the *origo mali*, he does not admit the constitutional origin, or scrofulous origin as it has been termed, but maintains that without injury from direct violence, let it be ever so slight, no joint disease would occur. In this we believe him to be correct; but he is far from ignoring the influence, that a weak or scrofulous diathesis will have in favouring the progress of joint affections, though it may not be the direct cause of their development.

In speaking of injury to the ankle-joint the author remarks that in a severe injury: "for example, in fracture involving the joint, or dislocation, or even a severe sprain—surgical aid is indispensable, and is immediately called for, and generally a cure results after a reasonable time. When, however, a person receives what

is termed a slight sprain of the ankle, the amount of mischief from neglect in recognizing what structures are involved, and instituting a proper method of treatment, is often extreme, and may terminate in a sacrifice of the limb." It is in these very cases that too often the surgeon calls to his aid, to account for the extensive mischief met with, the existence of a scrofulous diathesis, which, however correct, as a promoter of diseased action, cannot in justice be regarded as the chief factor. Dr. Sayre's treatment of joint affections is based on fixed principles, and may be summed up in a few words. It consists in rest, position of the limb, relief of spastic contraction of muscles, attention to the general health, and in due time passive motion.

The author is not an advocate for excision of the ankle or wrist joints, and even in the case of the knee, if the disease is limited, he declares "you may remove all the dead bone by drilling and gouging; pass seatons of oakum or perforated rubber tubing through the joint, *** and conduct the treatment upon the general plan recommended." So far as our experience goes we cannot agree with him in the success of this method as applied to the knee joint. We have on several occasions adopted this practice and invariably with disaster, and though willing to admit the serious and even dangerous character of the operation of excision, it has, in our hands, been remarkbly successful. The hip joint is treated of most fully; it is specially in this joint that the author practices exsection of the head of the bone and his success has been very remarkable. Space will not permit of further notice of this valuable treatise. Its teaching is sound, and the originality throughout very pleasing, in a word no man should attempt the treatment of deformities of joint affections, without being familiar with the views contained in these lectures.

A Directory for the Dissection of the Human Body.—By John Cleland, M.D., F.R.S., Professor of Anatomy and Physiology in Queen's College, Galway. 8 vo. pp. 182; Philadelphia: Henry C. Lea, 1877.

This little work is intended as a guide to students of anatomy,

to be used in the dissecting room. It gives specific directions on the use of instruments, the order of work to be done, and then proceeds to the consideration of the dissection of the various regions of the body, beginning with the dissection of the back and upper extremity, dissection of the lower extremity, of the head and neck, of the thorax, abdomen and pelvis.

We cannot commend this work; there is nothing in it that can to our mind aid the student of anatomy—in fact it would be far more liable to mislead him, and get him into a loose way of studying up the subject.

A Practical Treatise on the Diseases of Children.—By J. Forsyth Meigs, M.D., Physician to the Pennsylvania Hospital, &c., &c.; and William Pepper, A.M., M.D., Professor of Clinical Medicine in the University of Pennsylvania, &c. Sixth edition. Revised and enlarged. 8 vo. pp. 1012: Philadelphia, Lindsay & Blakiston, 1877.

Two years ago we noticed the fifth edition of this excellent work, and now we are called upon to express an opinion on the sixth. The rapid exhaustion of the fifth edition and demand for a new one speaks more of the practical teaching of this work, and of the favourable estimation in which it is held by the profession generally than anything that we could say on the subject.

The present edition does not differ very materially from the preceding. The authors have given more attention to the careful revision of the text than to the addition of new articles, indeed very little new matter was demanded, except on one or two subjects; thus the subject, of Night Terrors in Children is discussed under a separate heading, and we have also a chapter on Epidemic Cerebro-spinal Meningitis. Several other articles have received attention and have been rewritten. The present edition may be regarded as enunciating the views of the authors on the subjects treated of at the time of publication, and they state "that wherever these views have undergone modification or change since the last edition, it has been carefully noted,

and the attempt has been made to incorporate whatever is most important and trustworthy among the recent additions to our knowledge of Children's Diseases." In this we must admit the authors have succeeded, and we heartily commend this work for its practical teaching to our readers.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Ovariotomy.—(Three hundred additional cases; with remarks on drainage of the peritoneal cavity.—By T. Spencer Wells, F.R.C.S.)—The author had arranged in a table, similar in form to those in which he had brought five hundred cases of ovariotomy before the Society between 1859 and 1872, three hundred additional cases, representing the whole of his practice, from the five hundredth to the eighth hundredth case; distinguishing the cases performed in the Samaritan Hospital from those in private houses and in nursing institutions. The mortality in the sixth series of one hundred cases was twenty-eight, in the seventh and eighth twenty-four. This very nearly corresponded with the general mortality in the five hundred cases previously reported. But the author believed that the latter series comprised many more operations, in proportion, performed under very unfavorable or almost hopeless conditions. In many cases, where formerly he thought it right to put so very unfavourable a prognosis before a patient and her advisers that they probably did not desire or approve of operation, he had latterly been encouraged by recoveries in some cases apparently almost hopeless to express a more hopeful opinion; and, although in some cases very unexpected recoveries had been recorded, the result had often been what was feared, and the influence upon the number of deaths in proportion to the recoveries was quite appreciable. The author then discussed the influence of drainage of the peritoneal cavity—the most important of recent modifications of operative procedure—upon the results. He

traced the history of the practice from the early days of ovariotomy, when drainage by the ligature securing the pedicle, and the intraperitoneal method by ligature, or cautery were very generally adopted. He considered the occasional use of puncture and drainage, with or without simple or antiseptic injections, when called for after operation, to be no foundation for recent recommendations to prepare at the time of operation for drainage or injection in every case. Of the three hundred cases now brought before the Society, he had only made provision for drainage at the time of the operation in eight; and in only eleven other cases did fluid afterwards escape by opening of some portion of the wound, or by vaginal puncture. In some few of the fatal cases, he thought either primary or secondary drainage might have been useful; but he believed drainage should not be a general practice in ovariotomy, but should be reserved for the exceptional cases where collections of blood or serum might be expected to follow the operation. Mr. Wells then described the different modes of draining, and of using simple or antiseptic injections, reserving for another communication the important question of the more complete adoption of antiseptic precautions before, during, and after ovariotomy.

Mr. Bryant had used drainage in five cases; in four the result was good, and in three of them he had no doubt that it was due to the use of the drainage-tube. There were in the three cases extensive adhesions, the removal of which was followed by much redness of the peritoneum and considerable oozing of blood. He had used a glass tube in three of the cases, and a hardened India-rubber tube in the other.—Mr. Barwell asked how it was known, when a tube was introduced into Douglass' space, that it had actually entered.—Mr. Thomas Smith said that he could ask Mr. Wells a number of questions, but would confine himself to a few. It was possible that certain statistical results might be obtained at the expense of the sacrifice of those affected; and such statistics as those of Mr. Wells might lead more timid operators to refuse bad cases, and attempt to obtain favourable tables of statistics—an endeavour which he deprecated. On the other hand, the earlier ovariotomy statistics of the

Samaritan Hospital had been compared with those of the large hospitals, to show that, while in the former the mortality had been 21 per cent., in the latter it was 76 per cent. But the success in the general hospitals was not so great then as now; and, further, there were two ways of estimating the fatal results of ovariotomy. In the general hospitals all the deaths were put down as fatal cases of ovariotomy—there being included under this head three classes, 1, completed ovariotomy, 2, cases where the operation was proceeded with to a certain extent, but not complete; 3, cases where only an exploratory incision was made. The statistics of the Samaritan Hospital included only cases of completed ovariotomy. He thought that the rate of mortality would be much increased by taking into account the contemplated operations and exploratory incisions. Again, the experience of one most skilled in the operation was compared with that of various men, some well qualified to perform it, and others as disqualified. There were some things which the general hospitals could do, and some which they could not. They could, no doubt, obtain as good sanitary conditions as at the Samaritan Hospital; but they could not obtain such good nursing and medical supervision. The success at the Samaritan Hospital was a personal success; it depended on experience, on a sound and quick exercise of judgment, on the possession of resources to meet emergencies and of courage to face dangers; and with these there was a modesty which did not seek to make success in ovariotomy an occasion of public display. To these qualities Mr. Wells owed his success; and he had probably done more to diminish suffering than any other man. He would ask whether Mr. Wells introduced the drainage-tube because much fluid was present or because much was expected; and how he would deal with a cyst behind the broad ligament.—Sir Joseph Fayrer would like to hear Mr. Well's opinion on the use of antiseptics in the operation—Mr. Hulke said that some years ago, several cases of ovariotomy were performed in the Middlesex Hospital, the patients being placed in the general wards; and, all he believed were fatal. Since the patients operated on had been placed in a special ward, the mortality had been much less: he

had had four recoveries out of six operations.—Dr. Graily Hewitt congratulated Mr. Wells on the success which he had obtained. He had himself done about twenty-five completed operations; but his results, though satisfactory, were less so than those of Mr. Wells. He thought that Mr. Wells was correct in attributing the comparatively high mortality in his last three hundred cases to the large proportion of bad cases sent to him. With regard to the management of the pedicle he was in favour of bringing it outside the wound. Any room that might exist for improvement of the operation lay in the treatment of the pedicle.—Sir James Paget said it was most gratifying to him that on the last occasion of his presiding at an ordinary meeting of the Society, such a paper as that of Mr. Wells should have been read. He regarded ovariotomy as practised by Mr. Wells, as one of the greatest achievements of modern surgery; it must be measured not only by Mr. Wells' own success, but by the greatly increased success of all other surgeons. The improvement in ovariotomy had made surgeons much wiser than they previously were on all matters relating to peritoneal surgery; and not only so, but the influence for good had been extended to surgery in general. Mr. Spencer Wells, in reply, said it did not follow that because a great deal of fluid escaped when a tube was used, as much fluid would collect if a tube had not been used. It was quite possible that the presenee of a tube might lead to the secretion of the fluid which escaped, or at least increase secretion. He should not use a tube simply because ascites had been present, or ovarian fluid had been free in the peritoneal cavity. He should restrict its use to cases where the peritoneal cavity could not be completely cleansed, or where some bleeding might be feared after closure of the abdominal wall. If fluid collected some days after the operation, and formed a swelling between the uterus and the rectum it could easily be removed by a trocar introduced through the vaginal wall. In cases of mesenteric cysts, or cysts of the broad ligament, the treatment by enucleation or by drainage must be decided by the peculiarities of each case. The publication of medical details, in the annual reports of hospitals circulated to the public, was open to very grave objection, and Mr. Wells had opposed the use of such

details in the reports of the Samaritan Hospital; but he did believe that they had been of great use in stimulating the surgeons of general hospitals to a generous rivalry; and in proving that, if they did not wish to be outdone by smaller institutions, they must pay equal attention to the sanitary condition of the wards, to the nursing of the patients, and to all the details of management that could influence results. The success in the Samaritan Hospital could not be ow as it might have been before perhaps, what Mr. Smith called a "personal success"; for, out of the fifty-five operations performed in 1876, his colleagues, Mr. Thornton and Dr. Bantock, had contributed fourteen recoveries and only one death; whereas, of his own forty cases in the year, four had died. The practice of grouping together cases of completed ovariotomy with cases of incompleted operations, or of mere exploratory incisions could not be justified. It would be absurd to say that a patient who recovered for a time after an incision in the abdominal wall, and the escape of some fluid from the peritoneum, was a successful case of ovariotomy—no ovarian tumour having been removed, or perhaps existed. And, whether the result in statistical tables was favorable or the reverse, an incomplete operation should be recorded in a separate list, and should not be allowed to lead to false estimates of the mortality of ovariotomy when completed. The important question of antiseptics in this operation must be left for further observation. Mr. Wells on completing his eight hundredth operation, had almost decided to try one hundred cases in succession with every antiseptic precaution; and if he had done so, and had attained the same result as he had done without any alteration in his former practice, the conclusion would have been quite startling; for he had done twenty-seven cases since the eighth hundredth, and so far not one had died. If this happened under antiseptics, it would have been almost impossible to resist the conclusion that it was something more than a coincidence. Mr. Wells thanked the Society for the manner in which his paper had been received, and especially thanked Sir James Paget for his very kind remarks, which would more than repay any surgeon for years of hard work.—(*Royal Med. and Chir. Society, Feb. 27th.*)—*Brit. Medical Journal, March 3rd.*

Piles.—Immediate cure by Igni-puncture.—Mr. H. A. Reeves, of the London Hospital, has been trying igni-puncture, and found it invariably to rapidly cure piles. He draws down the piles and then punctures to their bases with conical pointed ends made to fit on to the gas cautery. A dull, red heat is required, and two or three punctures suffice for a pile the size of half a walnut. Hard ones to be pierced to their soft attachment. Ulcers and fissures in connection can be touched with the cautery. The bowels are kept confined by a morphine suppository for two or three days. The first motion is painful, but not so bad as before operation, and in a week the patients are discharged cured—a most favourable result, which Mr. Reeves contrasts with those obtained by clamps or ligatures. He does not seem to have seen the plan of injecting with carbolic acid lately mentioned in *The Doctor*. He sums up in the *Lancet* of the 17th ult., the advantages of his plan as follows:—

1st. The operation is quickly done.

2nd. The cure is much more speedy, as by the ligature or clamp and cautery, three weeks is considered quick time for convalescence.

3rd. There is no fear of secondary hæmorrhage, as there is no ligature to separate, and no wounded surface to cauterise.

4th. Nothing is removed. To the patient this is very often a strong recommendation; to the surgeon at first, and without experience of this method, it may seem a drawback, but sufficient trial will convince him to the contrary.

5th. There is no apprehension of secondary abscesses and fistulæ so far as my experience has gone.

6th. There cannot possibly be a stricture as a result of the operation. That this has occurred several times after the old methods no one can gainsay, and I may quote a case sent me by Dr. Heywood Smith, on which I operated by the clamp and cautery, and only removed the piles and not a particle of other rectal tissue, and in seven weeks had to commence the use of bougie for an annular stricture near the orifice. Nothing of the kind pre-existed.

7th. There are no relapses. Two of the cases I operated on

had been elsewhere treated by ligature, and the other with cl amp and cautery. Of course, if all the diseased part be not punctured at the time of operation, the portion left untouched may be the source of future trouble, necessitating an operation, and it may be that this was the explanation of the relapses in the two cases just mentioned. On the other hand it is fair to state that other veins already weak at the time of operation, but not sufficiently so to attract attention, subsequently enlarged and required meddling with.

8th. In patients who can bear a little pain no anæsthetics are necessary, as the operation is a quick one.

It is obvious that this plan can be applied to other varicose veins and to nævi.

Successful Gastrotomy.—A 17 year-old schoolboy, in February 1876, drank some potash solution, in consequence of which an almost impassable stricture of the œsophagus developed, $1\frac{3}{4}$ inches below the cricoid cartilage. After repeated and ineffectual attempts at dilatation, gastrotomy was performed on July 26th, to relieve the symptoms of starvation. An incision was made passing obliquely downwards and outwards, parallel to the 8th costal cartilage, and 2 cm. from it. After opening the peritoneum, the stomach was drawn into the wound with the forceps, and then fixed by means of two acupuncture needles. Before opening the stomach the walls were carefully stitched round the external wound, and finally an orifice, 1 cm. long made, in which a piece of an elastic catheter was placed and fastened. Through this the nourishment was given. The case progressed without an unfavorable symptom, and the patient recovered strength so quickly that in two months he had gained 8 kilogr. (16 lbs.) in weight. The author will not attempt to restore the passage in the œsophagus.

Up to this time there have been twenty cases in which the establishment of a permanent gastric fistula has been attempted, but all have ended fatally. This is the only one which has recovered. (M. Verneuil, Bull. de l'Acad. de Med. Quoted in Ctb. f. d. Med. Wiss. No. 3, 1876.)

Distal Ligature in Aortic Aneurism.—The history of the application of the distal ligature for the treatment of aortic aneurism is briefly this. There were certain cases on record of a ligature having been put on the left carotid for what was assumed to be carotid aneurism low down; and in some of them, notably those recorded by Tilanus and Rigen of Amsterdam, the patients recovered from the operation, living many months afterwards, and then died from some other disease, the aneurism being cured. In both these cases, it was proved after death that the diagnosis had been incorrect, and that the aneurisms had been aortic, and had been cured by being filled with clot. In 1829, a surgeon named Montgomery tied the left carotid for an aneurism which proved to be aortic, and it was nearly cured when the patient died some months afterwards. Mr. Samuel Lane tied the left carotid for an aneurism, partly carotid and partly aortic, in 1852; and Pirogoff appears to have had two similar cases.

These facts were known, but no special conclusions were drawn from them for the cure of aortic aneurism by surgical interference of this kind till Dr. Cockle wrote a paper in the *Lancet*, in 1869, where he recommended the application of a ligature to the left carotid as a means of treating aneurism of the arch of the aorta.

I have for some years taken considerable interest in the treatment of aneurisms of the root of the neck. I had a patient at the Westminster Hospital, in 1865, on whom I performed the operation of simultaneous ligature of the carotid and subclavian arteries for a supposed innominate aneurism; and, although the patient was under very unfavourable circumstances, she lived four years after the operation, and at her death the disease proved to be an aortic aneurism.

In 1872, with Dr. Cockle's concurrence, I tied the left carotid in a case of aortic aneurism, and the patient derived very great benefit, the aneurism subsiding immediately, and all urgent symptoms passing off until he renewed hard manual labour, when the sac again enlarged and killed him in September, 1876. The preparation, which is in the College of Surgeons, shows a

large sac arising from the first or ascending portion of the arch of the aorta. In 1874, I again placed a ligature on the left carotid in a case of aortic aneurism which had baffled treatment, but the patient died a few hours after from want of blood-supply to the brain. In 1875, Mr. Holmes successfully tied the left carotid in a young woman believed to have an aortic aneurism, and she is still alive and well. During this session, a man was under my care on whom I wished to operate, but he declined, and six weeks afterwards returned in great distress and died in a few hours. The specimen shows that this would have been a very favorable case of ligature of the left carotid.

The last case was in the woman on whom I had proposed to operate on Wednesday last. This woman had an aortic aneurism; and it was evident that, if something were not done, her life must shortly cease. She was forty-three years of age, and was admitted under Dr. Wilson Fox on January 10th. She was submitted to treatment by rest, by appropriate medicines, rigid diet, and so on, and particularly by the administration of iodide of potassium; and it is well to say that some physicians lay great stress upon the effect which iodide of potassium has in producing clot. She was fairly put under the influence of it, but experienced no benefit. The aneurism varied a good deal, but, on the whole, was increasing in size; and she was transferred to me, with the view of having the carotid tied. I had no doubt myself that the left was the proper one to tie, because it is essential that we should be beyond the disease; and, by tying the left, I made pretty certain that we should be beyond the aneurism. The death of the patient was due to the fact that we were obliged to lay her down; and, the trachea being already very much compressed by the aneurism, it became practically occluded. You will remember that I did laryngotomy; and, as the anterior jugular vein was very large, it was unavoidably divided during the operation; but still blood did not reach the lungs, and, except for the flattening of the trachea, the patient would no doubt have had sufficient air and have lived for the operation to be performed. Had I known that there was so much flattening of the trachea, I should not

have operated on the patient lying down; I should have had her sitting up in a chair and without an anæsthetic. But, in these cases of dyspnœa, we find chloroform gives so much relief, that we determined to administer it. If there ever was a favourable case for ligature of the left carotid, this was the one. The aneurism just involves, and no more, the orifice of the innominate, and springs from the upper part of the transverse portion of the arch of the aorta between the innominate and left carotid. If I were asked what case I should by preference choose for the operation, it would have been this very case. I think, in all probability, we should have had a good cure; for, even under very unfavourable circumstances, she had already a small clot in the aneurism; and, much as the untoward result is to be regretted, it must be remembered that she laboured under a disease necessarily and rapidly fatal if untreated.—*Clinical Lecture by C. Heath, F.R.C.S., in British Medical Journal.*

The Muscular Arterioles.—Mr. President and Gentlemen,—In this course of Lumleian Lectures, which, by the favour of yourself, Sir, and the Censors I am to have the honour to deliver, I propose to discuss certain questions relating to the structure of the minute blood-vessels and the forces concerned in carrying on and regulating the circulation of the blood. Upon this subject modern researches have thrown an entirely new light; and I shall endeavour to show that the increased knowledge of the physiology of the circulation which has been acquired within the last quarter of a century has rendered necessary a revision and correction of some pathological doctrines which had gained more or less general acceptance.

The chief anatomical discovery relating to the organs of circulation made during the period to which I refer was Henle's demonstration of the muscular elements in the middle coat of the arteries. John Hunter and others, it is true, had on theoretical grounds assumed that the middle coat of the arteries

contains muscular tissue ; but it was Henle (*Wochenshrift fur die gesammte Heilkunde*, 1840, No. 21, p. 329) who first described the fusiform muscular elements encircling the arterial tube between the outer and the inner coats, and who showed that these have the same characters as the unstriped muscular tissue of organic life.

There are obvious structural differences, corresponding with important diversities of physical function, between the large and the small arteries. The chief anatomical distinction between the large and the small arteries is to be found in their middle coat. The middle coat of the largest arteries is composed almost entirely of elastic tissue, with a very slight admixture of muscular fibres. As the arteries diminish in size, the proportion of muscular tissue increases, until, in the smallest arteries the middle coat is composed entirely of muscular tissue. These smallest arteries are commonly designated "muscular arterioles," to distinguish them from the large elastic arteries. The muscular arterioles, vary in diameter from the one-hundredth to the one-three-thousandth of an inch, have their middle coat composed of muscular fibre-cells, without the slightest admixture of connective or elastic tissue. The muscular fibre-cells, which, when separated, are seen to be elongated and spindle-shaped, with an oblong nucleus in the centre, are arranged in a circular manner round the arteries, forming contractile muscular lamellæ. The circular muscular coat in arteries between about the one-hundredth and the one-three-hundredth of an inch in diameter posseses two or three layers of muscular fibres. In the smaller arteries, the muscular coat consists of only a single layer of fibres, whose elements become shorter and shorter until, in the smallest arteries approaching the capilliaries, the muscular elements separate from each other and at length completely disappear.

The muscular coat has on its inner surface the tunica intima, and on its outer the tunica adventitia. The tunica intima consists of two layers: an inner epithelial layer, and a shining membrane which Kölliker calls the *elastic inner coat*. The tuica adventitia consists of connective tissue and fine elastic

fibres with elongated nuclei, having their long diameter parallel with the axis of the vessel. The tunica adventitia is generally as thick as, and often thicker than, the muscular coat; and it is readily made to swell up under the influence of certain reagents. My colleagaue Dr. Beale and other microscopic observers have demonstrated the presence of minute nervous ganglia and extremely delicate nervous fibres ramifying upon the minute arteries and the capillaries.

During the last quarter of a century, the physiology of the vaso-motor system and the relation between the nervous and the vascular apparatus has been the subject of laborious research by numerous and very able investigators; and the result has been a very large addition to our positive knowledge of the forces which are concerned in regulating the movement of the blood through the minutest subdivisions of the vascular system. M. Vulpian, in his two recently published volumes (*Leçons sur l'Appereil Vaso-Moteur*, Paris, 1875), has given a very lucid and complete history of these investigations. An able summary ef the physiology of the vaso-motor system appeared in the *British and Foreign Medico-Chirurgical Review* for October 1876; and the whole subject of the vascular mechanism has been treated with great ability by Dr. Michael Foster in his recently published *Handbook of Physiology*.

We have already seen that in the year 1840 Henle had demonstrated the muscular tissue of the middle arterial coat. About the same time, Stilling (*Recherches Pathologiques et Medico-Pratiques sur l' Irritation Spinale*, Leipzig, 1840) was led to the conclusion that there are certain nerves which influence the movements of the blood-vessels. For these nerves he invented the term *vaso-motor*, and he looked upon them as analogous to the *musculo-motor* nerves. But the starting-point of our present positive knowledge of the vaso-motor nerves was the year 1851, when M. Claude Bernard published his first conclusive experiments (*Comptes Rendus de la Société de Biologie*, 1851, p. 163). In his first memoir, Bernard showed that after division of the cervical sympathetic, but more especially after removal of the superior cervical ganglion, in

the horse, the dog, or the rabbit, there is an increased afflux of blood to the ear and the whole of that side of the face, and with this an elevation of temperature and an increased sensibility. In a second communication, made this time to l'Académie des Sciences (*Comptes Rendus de l'Acad. des Sciences*, Mars 29, 1852), he described in more detail the facts recorded in his first paper. It was not until towards the end of the year 1852 that Bernard published his explanation of the phenomena which he had discovered. Meanwhile, public attention having been directed to these researches, in the interval between the publication of Bernard's second and third memiors, Dr. Brown, Séquard had published in America (*Philadelphia Medical Examiner*, August 1852) the interesting results at which he had arrived. This able experimenter confirmed Bernard's observation of the dilitation of the blood-vessels and the elevation of temperature resulting from division of the cervical sympathetic. He then went on to show that the galvanic stimulus applied to the cut end of the peripheral portion of the nerve caused a constriction of the blood-vessels and a lowering of the temperature. He thus proved that the elevation of temperature resulting from division of the sympathetic is directly due to the increased afflux of blood consequent on paralysis of the arterioles. In Bernard's third memoir, published in November 1852 (*Comptes rendus de la Société de Biologie*, Nov. 1852, p. 168) he also records the observation that the increased blood-supply, which results from the paralysing influence of dividing the sympathetic is at once arrested by galvanising the divided end of the nerve, when the parts which were previously red and congested become pale and comparatively bloodless.

Since this great field of research was opened up by Claude Bernard and Brown-Séquard, numerous experimenters have entered upon it, and the result has heen the accumulation of many interesting facts and the construction of a tolerably consistent though not as yet an entirely complete theory of the vaso-motor system.

Time would not permit me now, even if it were necessary or desirable, to enter into the minute details of this extensive

subject. I need only refer to such ascertained facts and principles as have relation to some pathological phenomena which we shall presently have to discuss. The vaso-motor nerves may be said, in a general way, to belong to the great sympathetic; but, by means of communicating branches, they are also connected with the spinal nerves and with the spinal cord. In fact, there is reason to believe that all the vaso-motor fibres are derived from the cerebro-spinal axis, from which they pass out chiefly by the anterior roots of the spinal nerves; and that the chief centre of vaso-motor nerve action is the medulla oblongata, near the floor of the fourth ventricle. Injury to this part of the nervous centre or division of the cord in the upper cervical region, cutting off the communication between the centre above and the vaso-motor nerves, causes general relaxation of the arterioles and a fall of blood-pressure throughout the body. On the other hand, electrical stimulation of the centre excites general contraction of the arterioles and an increase of blood pressure.

The nerves which, when divided, cause arterial paralysis, and when stimulated excite arterial contraction, have been designated *vaso-constrictor* nerves. There are other nerves having a different, and in some respects, an antagonistic function: these are designated *vaso-dilators*. Of this class of nerves, the *chorda tympani* is a conspicuous type.

The chorda tympani is a branch of the facial nerve, which joins the lingual branch of the fifth nerve, and is distributed to the tongue and the submaxilliary gland. Bernard discovered that electrical stimulation of the peripheral end of the divided nerve causes great dilation of the blood-vessels of the submaxillary gland, and a rapid and profuse secretion of saliva.

Many experiments of various kinds have proved that the vessels may be made to contract or dilate by an influence conveyed through incident nerves to the centre, and thence reflected through other fibres to the arterioles. Thus when a sensitive nerve, such as the fifth, or a mixed nerve like the sciatic, has its central end stimulated, a reflex contraction of the arterioles occurs throughout the body, and the blood-pressure rises. On

the other hand, Ludwig and Cyon discovered that one branch of the pneumogastric, when its central end is stimulated, has a reflex influence on the vaso-motor nerves, which causes a general relaxation of the arterioles and a consequent fall of the blood-pressure. This nerve, therefore, is called *the depressor nerve*.

There is now a very general agreement amongst physiologists with respect to the influence which the heart, the large elastic arteries, and the muscular arterioles respectively exert upon the circulation. The force which propels the blood through systemic arteries, is derived entirely from the contraction of the muscular walls of the left ventricle of the heart. The elastic walls of the large arteries, distended by the injecting force of the ventricle, contract and force the blood onwards during the diastole of the ventricle. This forcible resiliency in the walls of the arteries is as obviously derived from the muscular contraction of the heart as the elastic power of an archer's bow has its source in the contracting muscles of the arm which bends the bow. The resiliency of the arterial wall, reacting upon the blood during the diastole of the ventricle, gradually converts the interrupted jet of blood from the heart into a continuous current in the minute arteries and capillaries. The muscular arterioles, under the influence of the vaso-motor system of nerves, regulate the blood-supply to the various organs and tissues. The action of the muscular arterioles is, as I have ventured to suggest(*Medico-Chirurgical Transactions*, vol. 51, p. 60), that of stopcocks. By the contraction of their muscular walls, their canals are narrowed, the blood-stream is in a corresponding degree lessened, and the pressure of blood in the larger arteries is increased. On the contrary, relaxation of the arterioles enlarges their canals, permits a fuller stream of blood to pass, and lowers the blood-pressure in the arterial trunks. The minute muscular arteries, therefore, through their stopcock action, exert a regulating but not a propelling influence upon the blood-current.

The influence of the heart, the larger elastic arteries, and the muscular arterioles respectively upon the circulation, may be demonstrated by the very simple apparatus which I have

here.* A pump is made of a hollow India-rubber ball, with two orifices, to one of which is attached a tube six inches long, and to the other an elastic India-rubber tube about four feet long, at the distal end of which is attached a metallic stopcock. The central orifice of each tube is guarded by a bullet valve. The end of the short tube is dipped in a basin of water, while the elastic ball is alternately relaxed and compressed by the hand. The intermitting jet of water from the hollow ball, representing the heart, is gradually converted into a continuous stream by the tube acting thus like the large elastic arteries, and the size of the continuous jet from the metallic orifice is regulated by turning the stop-cock: If, now, I substitute for the elastic tube one with rigid walls, the stream of water from the orifice of the stopcock is no longer continuous, but an interrupted pulsating jet; so, if the opening in the stopcock be large enough to allow the water to escape as fast as the pump drives it into the tube, the flow will be interrupted. This wide-open state of the stopcock represents a greatly dilated condition of the muscular arterioles, when the pulse may extend through the capillaries, even into the veins. For the conversion of the intermitting jet from the pump into a continuous stream from the stopcock, it is requisite that the orifice in the latter should be so small as to allow the fluid to accumulate in and distend the elastic tube, the resiliency of which continues to drive on the fluid, while the pump, representing the heart, is dilating to receive a fresh supply.

It is evident then that, while the contraction of the large arteries, which are mainly elastic but partly muscular, aids the heart in propelling the blood onwards towards the capillaries, the contraction of the arterioles, whose middle coat is entirely muscular, antagonises the heart and the larger arteries; but their stop-action, under the guidance of the nerous system, regulates the blood-supply to the nervous tissues and organs in accordance with their physiological requirements.

There is no evidence of a *peristaltic* muscular contraction of

* This apparatus was designed by Dr. Rutherford (*Lancet*, Oct. 12th, 872.)

the arteries, as some writers—amongst others, MM. Legros and Onimus—have supposed. Any one who has carefully watched the circulation in the web of the frog's foot, or in other transparent parts of a living animal, must have observed that, so long as the circulation is active, the blood-stream in the terminal arterioles is as continuous and uniform as it is in the capillaries, and there is no appearance of an alternating contraction and relaxation of the arterioles.

The true capillaries have no muscular fibre in their walls, and there is reason to believe that they have no power of active contraction. They become distended and dilated when the muscular arterioles are relaxed, and they return to their original size when the arterioles contract and lessen the blood-stream; but this contraction of the capillaries is probably the result of simple elastic resiliency after distension, and not of active vital contraction. The capillary obstruction which occurs during the progress of inflammation is of course quite different from a normal physiological impediment. — Lecture by George Johnson, M.D., F.R.S., in *British Medical Journal.*

Acute Exanthemata. — Concerning second attacks of the Acute Exanthemata, especially Scarlatina, Dr. Huttenbrenner of Vienna says:

That the assertion that an individual has suffered from two or more attacks of one and the same exanthem is not specially believed in, arises from the fact that, with the exception of small-pox, no objective signs are left behind. Measles and scarlatina leave no lasting trace behind them, and after a proportionally short time has elapsed one has no absolute proof that the patient has suffered from measles or scarlatina. Furthermore, there are other eruptions which may, on superficial observation, be mistaken for the above mentioned diseases; as for example, rubeola (rötheln) and urticaria. Latterly in Austria we have observed many cases of rubeola, which, as is well known, much resembles measles, and during the first days of its onset cannot

often be distinguished from measles. The course of the disease decides in such cases which exanthem we have before us. Thus we see that the assertion of the parents that their children have had measles two or three times, or as people say here the "spots" (Flecke), does not carry much weight. Urticaria can much more easily be distinguished from scarlet fever, although it often enough comes on as an acute illness with vomiting, &c., still it is easily distinguished by single red spots (which run together by spreading), the wheals, and itchiness, and an experienced man in such cases can with difficulty make an error of diagnosis. * * * * * * * * * * * * * Urticaria may sometimes occur during convalescence from scarlatina and may be mistaken for a relapse as it is often accompanied by fever and vomiting. I have observed one such case to which I shall refer below. In small-pox one has the characteristic scars and pitting as a proof of a previous attack if a second one should come on. In this connection it would be as well to remark that the varicella of infants very often occurs without regard to vaccination or small-pox, I mention this because Kassowitz in this Year-book has pronounced varicella and small-pox to be one and same disease. If varicella infantum is reckoned as variola then a second attack of small-pox is of very frequent occurrence; nay more, it is the rule and not the exception, in spite of repeated vaccinations * * * * * *

Koerner has written in this Year-book about scarlatinal relapses and has added all the known published cases. Three cases of relapse from scarlatina in children are mentioned; in all three cases the second rash came out soon after the first ($4\frac{1}{2}$ weeks, 4 weeks, and the 3rd 11 days); in the two first cases desquamation had already occurred, and in these a second desquamation took place in a characteristic way. In all cases of true relapse, or second attack, there must be desquamation of the skin. There are some cases of erythema which greatly resemble scarlatina, but in which no second desquamation occurs. I have seen many cases of general erythema coming on after operations and burns which might easily be mistaken for scarlatina. I lately observed a very instructive case in private practice; a little

girl 2½ years of age, with a somewhat pale skin, was burned by a furnace. The burn was about the size of a thaler, (three-shilling piece), of the second degree and situated on the right arm. On the second day after the accident (which was not thought much of by the parents) severe fever and general convulsions came on, and the whole body with the exception of the face was covered with a dark red erythema, which completely disappeared on pressure. The convulsions lasted for an hour, disappeared and returned again, after which they ceased altogether. The above symptoms exactly resemble the eruptive stage of scarlatina, still there were no initial symptoms as vomiting, &c., no throat affection, and finally not the slightest desquamation The erythema disappeared completely in three days, as also the fever. * * * Such attacks of erythema I have observed two or three days after operations, and also in cases of pneumonia of the apex before consolidation has taken place, I have observed general redness of the body; the absence of throat affection, and the character of the respirations would here save us from error. I have mentioned these cases to show how easily one might make a mistake, and how careful we should be before we pronounce a case to be a relapse or second attack of scarlatina. In every case of relapse or second attack, all the important symptoms must exist, especially those connected with the skin, and the characteristic desquamation must never be wanting. All the published cases of second attack should be received with caution if a true second desquamation did not occur. When a fresh eruption comes out during the second or beginning of the third week of the disease and before desquamation has taken place there is special need of caution; in cases complicated with diphtheritic sore throat desquamation is often delayed. In a boy 3½ years of age, with an ordinary attack of scarlatina the first 8 or 10 days passed without any bad symptoms. On the 10th day a diphtheritic membrane appeared in the throat and rapidly extended, the glands of the neck were much swollen, and on the 13th day a red rash appeared as confluent spots on the body and extremities, the spots disappearing in some places and coming out in others. In

some cases the skin remained quite normal, as on the back and posterior part of the thighs. This confluent eruption might easily have been mistaken for a relapse or fresh scarlatinal eruption, the more so that the temperature rose and the child suffered from convulsions; when one looked closely at these spots (about the size of the palm of the hand) one saw white wheals as in urticaria * * * * * * * * * *

The following case is interesting because this patient suffered from two true attacks of scarlatina within a short space of time. Two brothers, F. (7 years) and E. (3½ years), strong healthy boys, suffered during the past winter from measles, and a short time after from varicella, both diseases ran a normal course: four weeks after recovery from varicella the youngest took scarlatina with the usual prodromal symptoms; the throat symptoms were mild, the throat uniformly red with spots of yellow-green exudation on the tonsils which were easily removed. The eruption over the body, extremities and back, was uniform and not very severe. The eruption first appeared in the inguinal region, as fine red points; the forehead remained free from eruption throughout. The fever was not high, and disappeared at the beginning of the second week. Desquamation was well marked towards the end of the second week, and in the third week the skin of the palm of the hand and sole of the foot came off in one piece. Recovery was complete in four weeks. In the mean time the elder brother had been completely separated and so escaped the disease. He went to school where some cases of scarlatina occurred. After the dwelling had been thoroughly disinfected and aired, the elder boy came home and for six weeks remained healthy; in the beginning of the month of April he was taken with a very severe attack of scarlatina, which, in spite of the unfavourable symptoms at the beginning, ran a favourable course; throat affection existed in only a slight degree, and the forehead throughout remained also free from eruption. Some head symptoms existed in the beginning of the attack. The eruption itself was a bright red, (and with the exception of the forehead) covered the whole body. After six weeks desquamation began and involved the whole body. As the younger brother had

had scarlatina two months before, complete separation was not enforced, but he was merely restricted to the other end of the house. Twelve days after he became ill; fever, vomiting, difficulty of swallowing, and a diffuse redness of the fauces were the first symptoms. The following morning a scarlatinal eruption of a much more severe form than the first time, appeared. The course of the disease was favourable, and there was no throat or kidney complication, in 14 days desquamation set in. This child had in the short space of two months, two veritable attacks of scarlatina, with all the important symptoms pertaining thereto. In this case the cause of the second attack must have been due to family predisposition, as the mother during the first illness of the younger boy had a severe angina with some diphtheritic membrane, high fever, blood and albumen in the urine, symptoms which soon disappeared. No eruption could be made out, still, in the 3rd week there was a desquamation of small scales on the body and slightly on the extremities. If this was not scarlatina it was certainly a kindred disease. When the younger boy again had scarlatina the mother again took ill in precisely the same way as before, viz: throat affection with diphtheritic membrane, blood and albumen in the urine; in addition to the above symptoms she had acute joint affections. * * *

From this short sketch it follows:

(1.) That scarlatina, as is already known, may occur in one and the same individual twice, and within the short space of two months.

(2.) For the diagnosis of a second attack, one should not rely on a single prominent symptom, as the rash, but all the symptoms must exist, and the characteristic desquamation should not be wanting.

(3) The idea that because a person has recently had scarlatina, therefore he may expose himself to the disease, is erroneous, and that person should be completely separated so that there may be no danger of a second attack. The second attack may not always be so mild as in the above case, but on the contrary, according to Koerner, often runs a much more severe course

than the first; Koerner mentions 8 cases of death from second attacks.

(4). Family predisposition must not be overlooked.—(*Jahrburch. f. Kinderheilkunde*, Bd. x, 3und 4 Hf. 1. Nov. 1876.

Erythema Exudativum.—By Professor Lewin, (Berlin Klin. Wochenschr. xiii. 23, 1876.)—Prof. Lewin from observations in 39 cases, comes to the following conclusions:—

(1.) Erythema Exudativum is a vaso-motor neurosis.

(2.) It runs through several changes of development. The first stage may come on with or without fever. Prodromal stage is symmetrical, and various forms of subcutaneous infiltration occur (as eryth., tubercul., nodos., papulat., &c.,) on both sides of the body as well as red spots on the skin, exhibiting many forms (as erytha marginat., annulare, iris.) In a number of cases, after a longer or shorter time another phase of the disease sets in with fever rising as high as 41·0°C. (105°4-5 F.) and the following symptoms come on.

(*a.*) Rheumatic pains are felt and a pustular efflorescence of the erythematous skin appears which may be mistaken for small-pox.

(*b.*) An inflammatory affection, partly serous and partly pustular, shows itself in the different joints, so that the affection often presents the appearance of acute rheumatism, and ankylosis of the affected joints sometimes takes place.

(*c.*) Valvular endocarditis occurs, and may cause valvular insufficiency. In this way many cases of heart disease, whose origin is obscure, may be accounted for. Prof. Lewin has observed that the greater number of women suffering from erythema have some affection of the genital organs, as ulceration of the urethra due to the mechanical and chemical irritation of the passage from the rectum of the erythematous exudation.

(3). Finally the disease may sometimes be epidemic.—(Quoted in Schmidt's Jahrbücher, Bd. 172, No. 12. 1876.)

Pompholyx of the Hands.—The Influence of temperature on the occurrence of pompholyx of the hands. By E. Wyndham Cottle, M.A., F.R.C.S.

During the hot weather experienced in the months of July and August of last year my attention was attracted by the unusual number of cases of pompholyx of the hands that came under my observation. During that period of excessive heat, I had eleven patients under treatment for that complaint, some of whom, as the disease runs its usual course in well-marked cases, presented every stage in the development of the disorder, from the first early state, when there exists an inflammatory condition affecting chiefly the sides of the fingers, thumb and hand, and extending principally to its dorsal surface, accompanied by itching and smarting, with swelling and heat of the affected part; a few papules appear, passing into the vesicular stage, and leading on to the formation of distinct larger-sized vesicles and bullæ filled with serous fluid, the blebs not resulting from the coalescence of several smaller vesicles, as so commonly happens in severe eczema in this situation. The bullæ burst, discharge their fluid contents; the cuticle is shed, leaving the hand red and swollen; and the normal condition of parts is restored by the ordinary process of repair, presenting indeed in its progress grades very similar to the stages of exaggerated eczema manuum. In other instances the bullæ were fully formed when they first came under observation, and in others again the early inflammatory condition was not so well marked, the bullæ being at once produced, in one case, that of a lady, on the index finger of both hands one large bleb extended from the tip of the finger to the metacarpo-phalangeal joint, covering the entire palmar aspect, and encroaching on the dorsal surface of the digits on both borders; smaller bullæ also existed on the palmar face of the second and third fingers, from the tip to the 1st phalangeal articulation. With this patient there was a history of previous attacks of eczema of the hands following any cause of depression, but on no former occasion had the complaint assumed this form.

In two of the cases the liquid contained in the bullæ was neutral or alkaline; and in all, irritation and heat with exces-

sive perspiration of the part, which was literally poured out, preceded the eruption. All these patients were free from any other skin affection, the rash being entirely confined to the hands; but nine of the eleven were decidedly anæmic and in depressed health. Eight of the cases occurred in females, the remainder in men.

The late Mr. George Naylor alludes to this affection in his work on Diseases of the Skin as an uncommon and curious form of pompholyx, and describes it with his usual accuracy of observation; and it is quite distinct from the "pemphigus folliacé" of the French writers, which may perhaps be more properly regarded as a form of eczema, and with which it should not be confounded, though in the latter stages the resemblance is great.

I could trace no particular exciting cause in the above cases, though lately I have seen a nearly similar condition become developed in a lady of delicate health, who, in her anxiety for her children's welfare, had been applying with her hand some remedies I had prescribed for tinea tondens, from which they were suffering; but in this instance it was clearly the result of local irritation.

The only common condition I could find was the unusually high temperature, which lasted from the 20th of June till the 25th of August, within which period these examples occurred. This was a time of most unusually uniform heat, the minimum night temperature from the 20th of June to the end of the month varying from 47° to 61°. In July the minimum nocturnal temperature ranged between 52° and 66°, and from Aug. 1st to the 25th between 47° and 67°. In the daytime also, this period was distinguished throughout by its varying excess of heat, rather than by sudden accessions, with corresponding falls of the thermometer.

From June 20th to Aug. 25th, there came under my care, in private, and at the hospital, 564 new cases of cutaneous affections, including those eleven examples of pompholyx manuum, giving a ratio of rather more than 1.95 per cent. In the succeeding like period, Aug. 26th to Oct. 30th, when the weather had become comparatively cold, 473 fresh cases of skin

diseases passed under my hands, without affording a single example of the complaint in question, which remarkable difference, I think, warrants the inference that the prolonged and unusual heat acted as the exciting cause, setting up morbid processes in unhealthy individuals with defectively nourished tissues, and whose vitality had been depressed by the same cause.

It would be interesting to know whether other observers have remarked a like coincidence in the frequency of the complaint, or whether mine is to be regarded as an accidental experience, and not the usual condition of the occurrence of this relatively rare disease.—*The Lancet.*

Cases of Erythema Nodosum.—By Dr. V. Revillont, (*Gaz. des Hôp.* 86. 89, 1874.) Dr. R. describes three cases of eryth. nodosum occurring in women, and presenting the following appearances:

(1.) All had more or less elevation of temperature; in one case the temperature rose to 40.4°.C. (105° 2-5 F.)

(2.) Duration in all those cases, about three weeks.

(3.) In two of the cases an endocarditis developed itself during the course of the disease. The endocarditis manifested itself by a murmur with the first sound at the apex which remained after the erythema disappeared. In the third case there was an old murmur from a previous attack of the disease.

(4.) In all three cases a nodular and papular eruption came out and extended over the whole body, but was more especially seen on the upper and lower extremities. In one case the papular exanthem involved the whole depth of the skin, and there was great pain and inflammatory irritation in the neighbourhood of the joints and swelling of the sheaths of the tendons. In both of the other cases the disease seemed to have its seat in the subcutaneous cellular tissue and the skin over the prominences was red and painful. There was in both cases over both legs an erythematous redness and œdematous swelling of the subcutaneous cellular tissue, which Dr. Revillont considers as symptoms of great importance. Dr. R. calls this affection "fièvre essentielle érythematouse." — Quoted in *Schmidt's Jahrbücher*, Bd. 172, No. 12, 1876.

CANADA

Medical and Surgical Journal.

MONTREAL, MAY, 1877.

THE QUEBEC MEDICAL ACT.

By the terms of this Act all previous Acts or Ordinances bearing on the practice of Physic, Surgery or Midwifery in the Province of Quebec, and all Acts or Ordinances having reference to the method of obtaining a license to practice Medicine, Surgery or Midwifery in the same, are repealed.

Some excitement has been occasioned by an editorial article that appeared in "L'Union Médical du Canada," in which it is shown that the Board of Governors of the College of Physicians and Surgeons of the Province of Quebec, are incapable under the new Act to examine students on preliminary subjects. This and a few other questions we desire to enquire into, and we will have to take the Act as it is, and not as we intended it to be. The very first clause of the Act does away with

"All other Acts or parts of Acts in any manner relating to the practice of medicine, surgery or midwifery in the Province of Quebec, or in any manner relating to the mode of obtaining licenses to practice medicine, surgery or midwifery therein, shall be and are hereby repealed, except in so far as relates to any offence committed against the same or any of them before the passing of this Act, or any penalty or forfeiture incurred by reason of such offence."

This completely sweeps away all previous Acts. and leaves alone the present Act, under which the profession in this Province is now governed.

In clause II., The College of Physicians and Surgeons of the Province of Quebec is created. The old institution is simply defunct, gone, done away with. It is not a substitution

of the one for the other. It is not even a continuation of the old college. The College of Physicians and Surgeons of Lower Canada, a body that existed for thirty years, is permitted to perish, but from its ashes nothing, Phœnix like, arises. An entirely new body is created by this Act, with a new constitution. For whereas in the old college there existed two separate and distinct classes of licentiates and members, clause III of the new Act provides that

III. From and after the passing of this Act, the persons who compose the College of Physicians and Surgeons shall be styled "Members of the College of Physicians and Surgeons of the Province of Quebec."

Taking these three clauses as they are found on the statute book, it follows that all licensed practitioners residing in the Province of Quebec are by statute members of the College of Physicians and Surgeons of the Province of Quebec, and the date of their membership must be the date of their registration in the books of the College. Mark,—not the registration in the books of the College of Physicians and Surgeons of Lower Canada, for it has no longer an existence, but in the books of the College of Physicians and Surgeons of the Province of Quebec as created by this Act. On this head we have to refer to clauses XV., XVII. and XX. We copy them *in extenso*.

XV. All persons obtaining the license to practice from the College of Physicians and Surgeons of the Province of Quebec, shall be styled members of the said college, but shall not be eligible as governors within a period of four years from the date of their admission as members; and the said election of governors shall be made under such rules and regulations therefor, and in such manner as the Board of Governors shall ordain. The members of the college shall pay the sum of two dollars a year for the use of the college.

XVII. The Provincial Medical Board shall cause to be kept by the Registrar a book or register. to be called the Register, in which shall be entered, from time to time, the names of all persons who have complied with the enactments hereinafter contained, and with the rules and regulations made or to be made by the Provincial Medical Board respecting the qualifications to be required from practitioners of medicine, surgery and midwifery in the Province of Quebec; and those persons only whose names have been or shall hereafter be inscribed in the register above-mentioned shall be deemed to be qualified and licensed to practice medicine, surgery and midwifery in the Province of Quebec; and such register shall at all times be open and subject to inspection by any duly registered practitioner in the Province, or by any other person.

XX. Every member of the medical profession who, at the time of the passing of this Act, may be possessed of a *license* to practice medicine, surgery and midwifery in the Province of Quebec, shall, on the payment of the fee of one dollar, be entitled to be registered on producing to the Registrar the document conferring or evidencing the qualifications in respect whereof he seeks to be so registered, or upon transmitting by post to such Registrar information of his name and address, and evidence of the qualifications in respect whereof he seeks to be registered, and of the time or times at which the same was or were respectively obtained, *provided he register within one year* from the passing of this Act.

Again, in clause XXVIII. we find: That the present Board of Governors, elected under the provisions of the Acts hereinbefore repealed, shall be continued and shall act until after the next triennial election, but subject in all other respects to the provisions of this Act. There is no provision in this Act for holding a triennial election, and if such did exist there would be no members of the college as created under this Act who would be eligible for election as governors. It follows, therefore, that no new election can take place, as would have occurred under the old Act, in July next. The present Board of Governors are continued in office by the terms of the new Act, and until relief is obtained at the next session of Parliament no new election can be held. This we believe to be the position in which the profession is placed. This question with others, however, has been submitted to counsel for an opinion. The existence of powers of the college to examine students on preliminary subjects is another *questio vexata*. This will be discussed, but we do not see that the Act gives the right to the college to examine at all. Examiners have to be appointed to do the work, and the subjects to be examined upon are prescribed by the Act. The college may fix the time and place. This point appears to us clear. The By-laws, rules and regulations made by the College of Physicians and Surgeons of Lower Canada, shall remain in force, but subject in all other respects to the provisions of the new act, so that since by that act the Board of Governors of the College is not authorized to conduct examinations on preliminary subjects, so will it find itself powerless to conduct those examinations except by deputy.

REGISTRATION OF ALL PRACTITIONERS OF MEDICINE.

We would call the attention of all members of the Medical Profession in the Province of Quebec to the terms of the recent Medical Act passed at the last session of the Legislative Assembly of this Province. Section xi, clause 3, provides that "every member of the medical profession now practising or who may hereafter practice in the Province of Quebec, shall enregister his name, age, place of residence, nationality, the date of his license and the place where he obtained it in the books of the college," and in section xx, we read, "Every member of the Medical Profession who at the time of the passing of this act may be possessed of a license from the College of Physicians and Surgeons of Lower Canada, to practice Medicine, Surgery and Midwifery in the Province of Quebec, shall, on the payment of the fee of one dollar be entitled to be registered on producing to the Registrar the document conferring or evidencing the qualification, or each of the qualifications in respect whereof he seeks to be so registered, or upon transmitting by post to such Registrar information of his name and address and evidence of the the qualifications in respect whereof he seeks to be registered, and of the time or times at which they were respectively obtained, provided he register within one year after the passing of this Act."

And in the next section will be found the penalties for neglect to so register within the period prescribed by law. The register is now ready and will be opened at the ensuing meeting of the college, on the 9th inst. We give this notice that all members of the Board of Governors, and all others may govern themselves accordingly. We should suppose that the college will authorise its officers to give public notice of the requirements of the law, so that persons residing at a distance may not fail to comply with the Act. We should suppose that as soon as the probationary period will have elapsed the college will have prepared a printed official list of those registered under this act. This will be a necessary step, as no person shall be entitled to enter a court of law, or to recover charges for professional services rendered unless he can prove that he is registered under this Act.

It gives us great pleasure to announce that Richard L. MacDonnell, M.D., C.M., McGill University, 1876, son of our respected fellow-practitioner and former colleague Robert L. MacDonnell, M.D., of this city, passed his final examination before the court of examiners and received the diploma of Member of the Royal College of Surgeons of England, on the 25th of April last.

CANADA
MEDICAL & SURGICAL JOURNAL

Original Communications.

NOTES OF ABNORMALITIES,

OBSERVED IN THE DISSECTING ROOM OF McGILL UNIVERSITY

DURING THE WINTER SESSION OF 1876-77.

BY FRANCIS J. SHEPHERD, M.D., M.R.C.S., ENG.

DEMONSTRATOR OF ANATOMY.

The following notes were taken on the spot during the last winter's session from 33 bodies dissected. The record is necessarily far from complete, as many of the slighter variations altogether escape notice, or when seen are too much injured by dissection for complete notes to be taken.

Osseous System.—There is no record of any abnormality occurring in the osseous system except one case of atrophy of parietal bones in a woman. This, however, is rather pathological than anatomical.

Muscular System.—Muscles of face were normal in every subject.

Two examples of absence of the stylo-hyoid, both occurring in the same subject. Two examples of the stylo-glossus muscle passing in front of the external carotid artery, both these cases also occurred in the same subject. The anterior bellies of the

two digastrici frequently united in the middle line, and shut out the mylohyoid muscles from view.

In a muscular male subject the pectoralis minor arose by five digitations from the five upper ribs. In the same subject the pectoralis major had broad muscular attachments to the 5th, 6th, and 7th ribs near their costal cartilages. The pectoralis minor was often found to arise from the 2nd, 3rd, and 4th ribs, and the pectoralis major frequently was connected with the rectus abdominis in muscular subjects.

In six cases the biceps had an additional fleshy head, arising from a line about two inches long, between the attachments of the coraco-brachialis and the outer part of the brachialis anticus. In two subjects there was a muscular slip about $1\frac{1}{2}$ inches wide, running from the latissimus dorsi muscle to be inserted in one case into the coraco-brachialis and in the other the slip was attached to the pectoralis major near its insertion. Both these muscular slips covered the brachial and axillary vessels, and brachial plexus. One example of a third head to the pronator radii teres arising from the intermuscular septum between the brachialis anticus and internal head of the triceps. This third head was about two inches broad and completely covered the brachial artery in the space at the bend of the elbow. In two cases the palmaris longus was absent, and in one subject on both sides the palmaris longus was muscular down to the annular ligament, penniform in shape, resembling the flexor pollicis of the leg. In another case it arose by a long tendon which reached to below the middle of the forearm, where it ended in a pyriform muscular belly, this again ended in a tendon which was inserted into the palmar fascia in the usual way. One example of a special extensor of the middle finger of the right hand which arose from the ulna below the extensor indicis and went through the same division (4th) in the annular ligament. In the same subject the extensor minimi digiti was inserted into the annular ligament and the extensor carpi ulnaris sent part of its tendon to the little finger. One case in which the anterior belly of the omohyoid was fused with the sterno-hyoid so as to form one broad thin muscle bounded

below by a tendinous arch. I have no record of any abnormality occurring in the muscles of the back, except that the levator anguli scapulæ is often divided into two or more slips, which often have a much more extensive origin than is usual, sometimes arising from as many as six vertebræ.

In one subject there was rather a peculiar arrangement of the flexor brevis digitorum of the foot. It was divided into two distinct parts, which crossed each other. The superficial portion arose from the great tuberosity of the os calcis and divided into two tendons, which went to the second and third toes. The deep portion arose from the tendon of the flexor longus digitorum above the insertion of the accessorius muscle, it then passed downwards and outwards and also divided into two tendons, which went to the fourth and fifth toes.

I have very frequently seen the tendon of the short flexor distributed to the fifth toe, absent, or so small as often to be overlooked by a student; when it is of small size it is seldom perforated by the long flexor. I have also several cases of the abductor ossis metatarsi quinti (Wood) recorded.

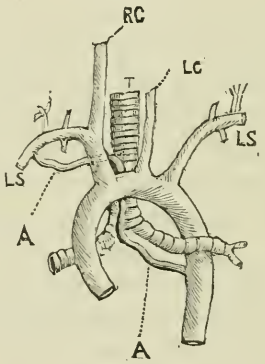
Arterial System.—Abnormalities of the arch of the aorta were few. There were two examples of the left carotid artery arising from the innominate; three examples of a middle thyroid artery being given off from the innominate. In one of these cases the middle thyroid was of very large size and anastomosed freely with the inferior thyroid.

In one subject there was rather a peculiar (and as far as I know hitherto undescribed) aberrant artery given off from the thoracic aorta opposite the upper border of the fifth dorsal vertebra, from here it proceeded upwards and towards the right side, running *over* the œsophagus and behind the arch of the aorta to the right bronchus, where it gave off two small branches to the bronchial glands, it then continued on upwards in a tortuous course to the right side of the trachea, ending finally in the lower border of the second part of the right subclavian artery. This aberrant artery was about the size of a goose quill. It is well known that the right subclavian sometimes arises from the descending aorta owing to atrophy of the 4th

right arch, and persistence of the right aortic root. (Turner Med. Chir. Rev., 1862). In this case the branches from the aortic arch were quite normal, so this aberrant artery seems to be a case of persistence of the right aortic root without atrophy of the 4th right vascular arch. The peculiarity of the vessel passing *over* the œsophagus is, however, difficult to account for.

There was one example of the right common carotid dividing above the hyoid bone. In one subject there was no thyroid axis given off from the right subclavian, each branch arose separately from the main artery.

The superior laryngeal artery was found to arise frequently directly from the external carotid.

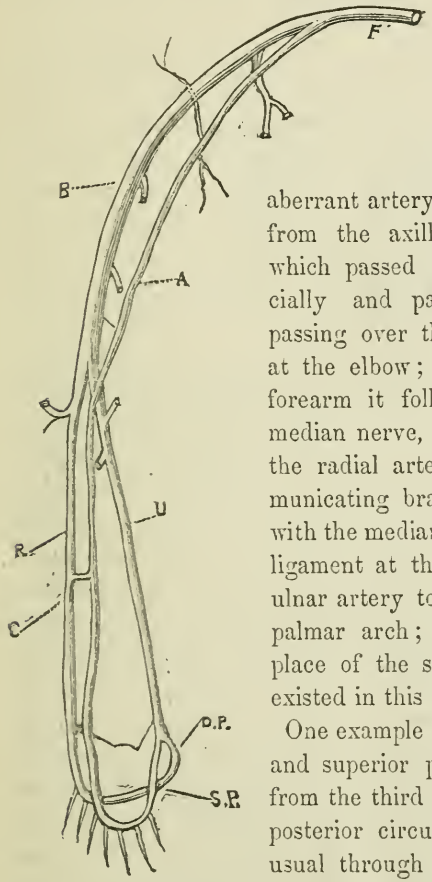


A. A. Aberrant Artery. L. S. L. S. Subclavian Arteries.
R. C. L. C. Carotid Arteries. T. Trachea.

One case of the posterior scapular artery arising from the 3rd part of subclavian, and giving off the dorsalis scapulæ. Many anomalies of the branches of the axillary artery were noted.

In one case anterior and posterior circumflex, subscapular and superior profunda, arose together. A still more rare variety is the following of which we had one example. The axillary artery gave off a large trunk nearly its own size which was embraced by the two heads of the median nerve, and divided into the anterior and posterior circumflex, subscapular, superior and inferior profunda. This variety occurred only twice in 456 subjects dissected at Guy's Hospital from 1866 to 1873. (Guy's

Hosp. Rep. vols. 14, 16 and 18.). In another case the acromio-thoracic, anterior and posterior circumflex and subscapular arose by one common trunk. In one subject there was a large trunk given off from the axillary (3rd part), which divided into the posterior circumflex, superior and inferior profunda, and an *aberrant* artery which went down the arm superficially and over the bicipital fascia; it then dipped down between the pronator radii teres and supinator longus, to join the interosseous artery.



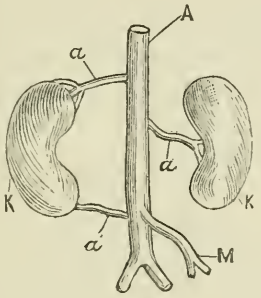
A. Abnormal Artery. F. Axillary. B. Brachial. R. Radial. U. Ulnar G. Communicating Branch between Aberrant Artery and Radial. D. P. Deep Palmar Arch. S. P. Superficial ditto.

There were several examples of the superior and inferior profunda arising by a common trunk from the axillary. In addition to the above aberrant artery, there was one given off from the axillary in another subject, which passed down the arm superficially and parallel to the brachial, passing over the intermuscular septum at the elbow; about the middle of the forearm it followed the course of the median nerve, and was connected with the radial artery by a transverse communicating branch, it then passed on with the median nerve under the annular ligament at the wrist, and joined the ulnar artery to complete the superficial palmar arch; apparently it took the place of the superficialis volæ, as none existed in this subject.

One example of the posterior circumflex and superior profunda arising together from the third part of the axillary. The posterior circumflex did not pass as is usual through the quadrilateral space,

but it passed through the triangular space below it, bounded by humerus externally, long head of triceps internally, and teres major above. The supra-scapular artery in the same subject arose on the right side from the first part of the axillary, and passed between the outer and inner cords of the brachial plexus to the supra-scapular notch. In three cases a long thoracic artery passed down on the serratus magnus with the nerve of Bell; in these cases the subscapular was of smaller size. High division of the brachial occured five times. In three cases the artery divided just below the latissimus dorsi. The ulnar artery in these cases was given off on the radial side and crossed over to the ulnar, giving off before doing so the radial recurrent. In two cases the division took place just above the bend of the elbow, and in both these cases the ulnar passed *superficially* over the muscles arising from the internal condyle. In one of these cases the interosseous supplied both recurrent ulnars and in the other only the anterior, the superior profunda from the brachial taking the place of the posterior ulnar recurrent. Two examples of large *A. comes mediani*, supplying two and a half fingers, the ulnar artery in this case only supplying the little finger and half the ring finger; in fact the distribution of the arteries exactly corresponds to that of the nerves. These cases both occurred in the same subject. In the pelvis the most important arterial abnormality is that of the obturator arising from the deep epigastric. During the past winter I have observed this in ten (10) cases, three occurring on both sides of the body. In two cases the obturator passed to the inner side of the femoral ring. Ten cases of abnormal obturator occurring in 33 subjects is not much above Quain's average which is 1 in 3½. In one case I observed the internal epigastric and internal circumflex arising by a common trunk from the femoral, about half an inch below Poupart's ligament, and in another the deep circumflex ilii arose from the femoral in common with the external circumflex one inch below Poupart's ligament. The external circumflex or some of its branches in at least a third of the cases arose from the common femoral instead of the deep.

In one subject on the left side there was no sciatic artery, the gluteal in this case supplied the muscular branches, and the pudic supplied the coccygeus and comes. N. ischiadici. There was one example of the deep pudic branch from the common femoral, taking the place of the dorsal artery of the penis. In three cases the kidney was supplied by two arteries, arising separately from the aorta. In one case the superior one entered the extreme upper end of the kidney, and the inferior extreme lower end, as is represented in the plate. There was



a, a, a, Renal Arteries. A. Aorta. M. Inferior Mesenteric Artery. K. K. Kidneys.

one example of absence of the dorsalis pedis artery, the anterior tibial artery terminating immediately below the annular ligament.

Nervous System.—The median nerve passed behind the brachial artery in three cases. Two examples of the musculo-cutaneous nerve of the brachial plexus after piercing the coraco-brachialis muscle and supplying the biceps, joining the median. This latter nerve gave the branch to the brachialis anticus and also the cutaneous branch to the outer side of the arm. Two examples, occurring in the same subject, of the ulnar nerve arising by two heads, one from the outer and one from the inner cord of the brachial plexus. In one subject the ulnar nerve supplied the little and *all* the ring finger. There was one case where the posterior tibial nerve at the inner ankle was anterior instead of posterior to the artery. The nerve crossed under

he artery about the middle of the leg. In one subject there was a nerve from the sacral plexus which pierced the great sacro-sciatic ligament and accompanied the coccygeal artery.

Internal Organs.—There are few abnormalities noted down Several cases of abnormally long sigmoid flexure and one case where the rectum began on the right side instead of the left, the sigmoid flexure crossing over to the right side. In one subject there was a *diverticulum* from the ileum about two feet from the ileocæcal valve. The diverticulum was about the size of a tallow candle, and three inches in length. It was unattached by peritoneum, and floated quite freely. In this same subject, the appendix vermiformis measured six and a half ($6\frac{1}{2}$) inches in length. There was nothing else worthy of being recorded.

TETANUS.

FOLLOWING AMPUTATION OF THE INDEX FINGER,

Treated with Chloral Hydrate.

By George C. Duncan, M.D., C.M.

Having been convinced for some time of the therapeutic value of chloral hydrate in the treatment of tetanus, I beg to bring before the notice of the profession a case which recovered, I think, chiefly owing to chloral. On account of the diversity of opinion which exists in regard to the pathology of the disease different modes of treatment necessarily have been recommended by the advocates of the different theories. As the young practitioner in such cases is very often left to his own judgment in the selection of his treatment, and as it is yet an unsettled question in medical science what is the most effectual remedy for the successful treatment of tetanus, and considering that many of the descriptions of the treatment hitherto resorted to have been, for the most part, vague and unsatisfactory, I venture to give the treatment and the following notes of a case, hoping that it may tend in time to help to arrive at some conclusion in the matter.

Dec. 9th, 1876.—Mr. T., a well developed young gentleman, of a sanguine temperament, came to me to have his index finger dressed, which he stated had been amputated a few days previous and had not been dressed for several days on account of having to leave the vicinity where he resided immediately after the operation, and, as he would be travelling for several days, his surgeon instructed him to dress it with ung. zinci. I found the finger swollen and the wound discharging very copiously. After thoroughly washing it, I dressed it with carbolic oil, 1–40. It may be well to mention here the cause of amputation; a few years previous he had the end of his finger taken off by some machinery, and the bone had been exposed ever since, so he concluded to have it amputated.

14*th.*—The wound has progressed very favorably until to-day, when it became tumid and swollen, and very painful to the touch. Pulse, 88.

15*th.*—Pulse 90. Came to me complaining of his jaws being stiff, and asked me if it was "tetanus," which I tried to laugh him out of by telling him that it was his imagination, &c., as he had assisted me the previous day in dressing a crushed arm and hand, and after that he had discussed the probability of tetanus occurring from it. Towards evening he called again, stating that he felt chilly, and that it was with difficulty that he could open his mouth. I advised him to take some whisky and hot water, which relieved him. Pulse 104. Wound healing rapidly.

16*th.*—Pulse 114.—Looks haggard and tired. He seems in good spirits and does not complain of any distinct pain. The masseters are rigid, and his mouth cannot be opened more than half an inch, and he complains of a stiff sensation of the throat. As he obtained relief last evening from whisky I resolved to try it again. Ordered whisky every two hours, alternated with beef-tea. During the day he continued very much the same, until 8.30 p.m., when a distinct spasm occurred. The features were haggard, and the forehead bathed in perspiration. Pulse, 120. Pain along spine, but especially over sacral region. No opisthotonos. Ordered chloral hydrate grs. xxx. Visited him again

at 11 p.m. He has had no return of spasm, and can open the mouth about $\frac{3}{4}$ of an inch, but says he cannot got to sleep. Pulse 114. Gave chloral grs. xxx. Temperature, 98.6°

17*th.*—Pulse, 112. Slept well during the remainder of last night. Finger looks well, but he complains of pain in it. Can't open his mouth sufficiently to allow the end of his thumb to enter. Ordered beef-tea and milk, which he seemed to swallow with difficulty. As his bowels had not moved for two days I ordered pil rhei. co. gr. iii, and chlor. hyd. gr. xx. every three hours. Was very restless all day, and very excited at times, and has had three of what he calls his stiff attacks, complained all the evening of pain in the back of his head, and at 9.30 p.m. he had a severe spasm, teeth firmly closed, slight oposthotonos. Gave chloral hydrate, and in about 15 minutes the spasm passed off, leaving him weak, and, as he expressed it sore all over. Pulse, 120. Temperature 99.4° His mouth can be opened about half an inch. Took a small quantity of soup. Suddenly he complained of the finger paining him, which was relieved after it was dressed. Gave chloral hydrate, grs xxx, at 11 p.m.

18*th.*—Pulse 100. Temperature 99°. His night attendant states that he slept very soundly shortly after midnight, but towards morning became very restless, and after a time delirious, imagining that he was being promoted in some secret order, and discussed its merits at great length. He is very weak and irritable. By using considerable force his mouth can be opened about $\frac{1}{4}$ of an inch, but as soon as the pressure is taken away it closes. He complains of pain in the back of his head, down the back and across the loins. The chloral was ordered to be continued in the same quantity as yesterday, viz. xx grs. every three hours. He says that he cannot use his throat to swallow, as it is so stiff. He was fed with a spoon about ℥ij of beef-tea, but wished to wait for a short time. Bowels moved freely. At noon he could talk quite freely and open and close his mouth about half an inch, but the movement is very slow. Seems quite delighted with the improvement and took some oysters, after which he slept for three hours, when he awoke with a sense of suffocation, severe pain in the back of the head and back. Gave

chloral grs. xx, after which the pains disappeared, and he went asleep in about half an hour afterwards, and remained so until 11 p.m., when he awoke he stared around quite bewildered, and said he had no recollection of the whole day. Feels very languid and yawns almost incessantly, and opens and shuts his mouth quite freely about half an inch. Left him with instruction to repeat the chloral in xx gr. doses during the remainder of the night if awake.

19*th*.—Pulse 88, very soft and compressible. Temperature, 98.2°. After taking two xx gr. doses of chloral last night, he fell into a sound sleep, which continued for six hours, when he awoke and felt much better as far as his throat and mouth were concerned. Can open his mouth quite freely. Pupils widely dilated, but feels very weak and tired. Took some oysters and beef-tea. Ordered ℥i whisky every two hours, alternated with beef tea and chloral grs, xxx, every six hours.

At 4 p.m. he had a slight spasm, which lasted about twenty minutes, after which xx grs. of chloral were given. Bowels moved shortly after.

20*th*.—Pulse 85, and compressible. Temperature 98°. Pale and nervous. Cannot open his mouth as wide as formerly, but attributes it to the soreness of the muscles. Complains of the back being very sore, as though it had been pounded. During the day took a considerable quantity of food and whisky. No chloral. Had no spasm during the day, was up several hours. On account of the painin his back, and his restlessness at night, I gave him morph. sulph. gr. ⅓.

21*st*.—Temperature 98.8°. Pulse 86. Says he feels much better, but this morning on attempting to get out of bed he was seized with a spasm which caused a distinct oposthotonos for about ten minutes. Ordered chloral hydrate grs. xxx. Tongue clean, but still some pain in his back. Took a good breakfast of fish and chops. Can open his mouth with ease. On account of some family business, caused by the death of his father, he had to undertake a railway journey of several hundred miles. Very reluctantly I was forced to consent, he assuming the responsibility. If the spasm returned, I instructed

him to have recourse to chloral, with which I provided him for the journey.

25th.—I received word from him that he had stood the journey very well, but that on the morning of the 23rd he had two very severe spasms causing him to screech with pain until he got the chloral, after which he continued quite well until the 28th.

April 24th, '77.—Patient called on me, looking very well, and states that since the date mentioned above he has had no return of the symptoms, and has enjoyed very good health.

TREATMENT OF HÆMORRHOIDS,
INJECTIONS OF CARBOLIC ACID OIL.

BY GEORGE WOOD, M.D., FARIBAULT, MIN.

The following method of treating piles has been attended with such marked relief in several cases, that I cannot resist the publication of them in your journal. The treatment adopted is simple and efficacious, and so far as my own experience goes perfectly safe. I give you a hasty account of several cases, with the results—which appeared marvellous—in as few words as possible. The method I adopted was as follows:

Draw down the piles and inject from three to fifteen drops of equal parts of carbolic acid and oil. The pile immediately whitens and feels like a piece of cheese. Give morphia, hypodermically for a day or two, and then move the bowels with the following:

℞. Powdered senna leaves; liquorice root, fennel seeds; washed sulphur aa ℥j; white sugar, ℥ij. M.

Dose, a teaspoofnul every six hours, until it operates, and then a teaspoonful at night, for a short time. In a week you cannot find any trace of the pile. I treated one case of 27 years' standing, and in a week the patient was entirely cured. This patient had eight large piles. And three cases of 17 years' standing, one pile as large as a hen's egg, which bled at times, so that the patient had attacks of syncope. And again in a case where there was one small pile, treated by my partner Dr. Rose, the cure was effected in a week. Another case, one pile of eight years standing was cured in three days.

Faribault, Min., May 19th, 1877.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Psoas Abscess following Excision of Testicle.—Under the care of Dr. GEO. E. FENWICK. Reported by Mr. D. F. SMITH.

G. S., æt. 46, blacksmith, was admitted into the Montreal General Hospital on the 13th of March, 1877, with contraction of the left thigh upon the abdomen, to an angle of about 90°, and great pain in the groin on any attempt to extend the limb. He had been in the hospital in the month of August, 1876, with enlargement and suppuration of the left testicle, which was diagnosed as tubercular in origin. The testicle was excised and found to be tubercular. His testicle had become first enlarged about three years ago, and since that time he had suffered more or less from an aching pain in the left lumbar region. At the time when the testicle was excised, the walls of the vas deferens were found to be much thickened and the canal filled with a purulent secretion. The wound healed well, and he was discharged on the 15th October, still complaining at times of pain in the left loin. From a short time after his discharge from the hospital, he began to find some difficulty in extending his leg fully, and the contraction of the thigh upon the abdomen rapidly increased. On his re-admission into hospital the contraction was as stated above. When lying on his back he had to bend his back forward in order to bring the left leg near the bed at all.

There was a fulness in the left iliac region, some tenderness on pressure here, dulness on percussion, and a sense of deep fluctuation immediately above Poupart's ligament. There was no tenderness over the vertebræ, and no suspicion of caries of them Dr. Fenwick explored with a fine exploring trocar and got pus. He then made a cut about two inches long above and parallel to Poupart's ligament, one inch from the anterior superior spine of the ilium, and dissected down carefully till he opened the sac of a large abscess, from which about a pint of healthy-looking pus escaped. For two nights his temperature

was 102°, after which it fell to normal and has remained so since that time. Two weeks after this, finding that the pus did not appear to escape sufficiently, Dr. Fenwick put the patient under chloroform for the purpose of exploring the cavity more carefully, and succeeded in bringing the point of a long probe to the surface just below the twelfth rib, about 2½ inches from the vertebral column, made an opening here and passed a drainage tube. Since then the patient's condition has rapidly improved. On the 12th of May, and now, the drainage tube still remaining in, the discharge is very slight and the patient can walk very well, being able to extend the left leg almost as well as he can the right.

Case of Lithotomy.—By Geo. E. Fenwick, M.D. Reported by Mr. D. F. Smith.

C. D., æt. 29, wheelwright, was admitted into the Montreal General Hospital on the 28th of March, 1877. Patient had always enjoyed good health until six years ago, when he began to suffer from some renal disorder. In October, 1870, he felt a grinding pain in the left lumbar region, and suddenly on the following night a very severe paroxysm of pain over the kidney and extending down in the direction of the ureter. This attack was attended with nausea and vomiting, and a 'quivering of the muscles,' He had several such attacks during the summer of 1871, and suffered from the grinding pain in his left loin almost constantly. In the autumn of this year he had three very severe attacks of renal colic in one week, and a couple of weeks afterwards passed in micturition two calculi of the size of beans. From this time till December 9th, 1873, he had no recurrence of these attacks. At this time the old attacks returned with occasional severe paroxysms. He suffered so much that he had to keep his bed. At the end of December he had retention of urine for thirty hours when he was relieved by a catheter. On February 15th his bladder was explored with a sound and he was told that he had a stone. He then came in to the Montreal General Hospital, but no stone was detected after careful exam-

ination. In April of this year, 1874, he had some more severe attacks. After these passed off he had ease for some time, but he soon began to suffer from pain in the bladder and a difficulty in micturition, the stream stopping suddenly. These symptoms kept increasing, and he came again to the Montreal General Hospital on the 28th of March, feeling positive that there was a stone in his bladder. At this time his general health was good. He suffered a good deal of pain in the perineum when walking. No tenderness over the bladder, and very little irritability of the bladder. He could retain his water for two hours at a time. There was a good deal of mucus in the urine but no pus. He was examined by Dr. Fenwick who immediately detected the presence of a stone, apparently of moderate size. The examination was attended by a good deal of fever and the passage of blood with his urine for two days afterwards, and some pain in the left lumbar region. After this irritation had subsided attempts were made on three occasions to seize the stone with a lithotrite but unsuccessfully. Although the stone could be constantly felt with the blades of the instrument, it could not be grasped. Each attempt was followed by a rise of temperature to 103° or 104°, for one or two nights, and the passage of large quantities of blood with the urine. Feeling that some condition existed which prevented the seizure of the stone with the lithotrite, Dr. Fenwick decided to perform lithotomy. On the 24th of April he performed the lateral operation, Dr. Ross holding the staff for him. A large, irregularly-shaped calculus, weighing $1\frac{3}{4}$ ounces was removed. It was soft and phosphatic, and broke to pieces in the attempt to remove it. It appeared to be adherent to the wall of the bladder, and had to be forcibly torn away. On the night following the operation his temperature rose to 105°. pulse 108. Next morning temperature was 101°, pulse was 96. For five days temperature ranged from 100° to 101 ; on the night of the 5th day it was 103°, after which it fell to the normal and has remained at that ever since. The patient suffered a good deal from pain in his back, particularly on the left side. After the operation he retained his water regularly for four hours at a time. There was a good deal of

blood and mucus in the urine for a few days. The case progressed most favorably, and on the 17th day after the operation the urine ceased entirely to come through the wound, he has passed a few small fragments through the urethra. On May 12th the patient was ordered his clothes, and on the 14th was discharged. The only thing that he now complained of was a feeling of weakness in his back, and after a little fatigue a dull pain in his left loin.

Case of Unilateral Convulsions, Cheyne-Stokes Respiration. Death.—Under the care of Dr. Ross. Reported by Mr. GUERIN.

On the 23rd of April, at 9 a.m., the patient was brought to the hospital by the police. His name was unknown. He had been seized with convulsions in a drinking-place, and had been unconscious ever since, with frequent convulsive attacks. He was a stout, strong-looking man, about 40 years of age. It was found out after his death that he was a carter by occupation, and was much addicted to intemperance.

1, p.m.—Patient still unconscious. Has had seven convulsive attacks since his admission. The convulsion is confined almost entirely to the left side. The right arm and leg, move very slightly.

Pupils of natural size, not dilated. No reflex movements induced by touching cornea, or tickling sole of foot. He has evacuated his bowels and bladder involuntarily. There is no distension of the bladder. His respirations are ten in the minute, and stertorous. Some urine was drawn from the bladder and examined. Found it to be free from albumen and sugar. Specific gravity 1015. Pulse 90. He was ordered morphia gr. $\frac{1}{2}$, hypodermically.

5.30 p.m.—After the morphia the patient had no convulsions till 3 o'clock. Coma still profound. Pupils much contracted. Pulse 136, irregular and intermittent. Pulsation of heart forcible. Second sound scarcely audible. Epigastric pulsation very marked. Face and lips greatly congested. Respirations

16 in the minute, showing a peculiar irregularity in the rhythm, which the house surgeon noticed about 3 o'clock. It resembles that described as Cheyne-Stokes respiration. A distinct cessation of breathing occurs every 1¼ minute, and lasts ten seconds. Then the respirations begin gently and slowly, becoming more laborious and deeper, and gradually growing shallow again till another interruption occurs. The ascending and descending rhythm are distinct, and the period and duration of the interruption are always the same. When the breathing stops, the limbs, particularly the left arm and leg, become rigid and flexed, and again become flaccid when the breathing goes on.

12 p.m.—The patient has had four convulsions since 9 p.m. Pulse 140, irregular in rhythm and volume, not intermittent. Respirations 24 in the minute. The peculiar rhythm noticed above has ceased. Pupils more contracted. The patient has not evacuated his bowels or bladder since morning. Bladder slightly distended.

The patient died at 5 a.m., on the 24th of April. At the autopsy nothing was found to account for the condition that the patient was in before death. The brain, heart and vessels, liver and kidneys appeared to be healthy.

Correspondence.

EDINBURGH, MAY 13th, 1877.

DEAR MR. EDITOR,—As I have hardly been a week in Edinburgh, I have scarcely yet had time to collect any notes worth communicating. However, I will give you a short contribution by way of showing you that I have not forgotten my promise.

I have, of course, been following Lister very closely in his antiseptic work, and must say have been already deeply impressed in favor of his system. He is a wonderful enthusiast, and has the faculty of imparting his enthusiasm to those about him, so that his House Surgeon, dressers, and nurses vie with

each other in carrying out, to the letter, his instructions. They feel besides that any want of attention on their part is liable at any moment to be known by Lister, who himself dresses a certain number of cases indiscriminately each day, partly for the purpose of detecting any inadvertence. I am convinced that it would be worse than useless to attempt to carry out the antiseptic system without the most thorough co-operation of all those having to do with it. Lister, in fact, most emphatically asserts that the cause of the failure of antiseptic surgery in so many hospitals, and in the hands of so many private surgeons, is in main part, the want of attention and indifference of those concerned. All the other surgeons attached to the Infirmary, with the single exception of Mr. Spence, are thorough converts to the antiseptic treatment, and carry it out just as faithfully as does Lister himself. Mr. Spence advocates what he terms "common sense surgery," but it is thought not improbable that even he may, at no distant date, overcome his prejudices. Mr. Lister announced to the class, with uncontrolled pleasure the other day, that the great Langenbeck, whom he considers the Father of German surgery, was now carrying out "the antiseptic treatment" in all his cases.

By-the-way, I understand that the Kings College Hospital authorities are still making overtures to Lister, and the Edinburgh men express a fear that they may yet lose him. He went up to London yesterday to attend a meeting of the Medical Council so that it is within the bounds of possibility that he may be induced to reconsider his adverse decision, made with such emphasis a few weeks ago. Notwithstanding his love for Edinburgh, with its cherished memories of Syme, he feels, I believe, that here his sphere of usefulness is limited, while in London he would have a grand centre for the dissemination of his antiseptic doctrines. He would be much missed here for he is a great favorite both with his brother surgeons and the students of the University; and besides, being a man of means and independent of practice, he can devote a large share of his time to hospital work.

Among the patients in the Infirmary that have interested me

most since my arrival are undoubtedly three cases of *nerve stretching for sciatica*. One of the cases was operated on by Mr. Lister, the others by Dr. Chiene, one of the assistant surgeons, who always takes charge of Lister's wards during the absence of the latter from the city. The patients were all men, aged about thirty, and had suffered from the disease for many months—in fact one of the patients had not been free from sciatica for nearly five years. The ordinary treatment recommended for this disease had in all the cases been faithfully carried out, such as the application of Corrigan's hammer, acupuncture, hypodermic injections, blistering, purging, &c., but in none were these measures of any avail. The symptoms were mainly great pain, feeling of numbness, and loss of power of the limb. In the operation the directions laid down by Nussbaum were carried out, viz., after exposing the nerve immediately below the gluteal fold, powerful traction was made on it first from below, then from above, and lastly at right angles to the body,—with such force in the latter direction as to raise the body of the patient off the table. The relief was instantaneous so that on the day following the operation each man was found perfectly free from pain, and with considerable power in the limb. The recovery in all three cases has been uninterrupted. Of course too short a time has yet elapsed to allow one to judge of the permanent nature of the cure, but to have given relief to pain and to have restored power to a limb for even a few weeks, is certainly a sufficient justification of the operation. The *modus operandi* of nerve-stretching in sciatica is a subject of very great interest, and will no doubt receive the early attention of pathologists.

I have been struck more than once with the amount of original thought that is being developed by the few here who earnestly believe in the antiseptic system. The most unheard of expedients are devised, and the ordinary surgical rules set at defiance when the desire is to treat a case antiseptically. To give you an illustration,—a few days since a lad about twelve years of age presented himself to Dr. Chiene suffering from post pharyngeal abscess the result of disease of the cervical

vertebræ. He at once asked the question, "How can I prevent this pus from becoming putrescent; how can I treat this case antiseptically? It certainly cannot be done by following the ordinary practice of opening the abscess through the mouth with a guarded bistoury. I must get at the pus by some other route. I will endeavour to reach it under the spray, *behind the sterno-mastoid muscle.*" After a careful dissection he did reach it and drew off about eight ounces of pus, and the case has done admirably well ever since.

I am watching a number of very interesting cases, which I may make the subject of another letter before I go down to London next month.

Yours, very truly,
T. G. R.

Reviews and Notices of Books.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen, Vol. VII.—Diseases of the Chylopoetic System, together with Chapters on Diseases of the Naso-Pharyngeal Cavity and Pharynx, Laryngitis Phlegmonosa, Perichondritis Laryngea, Ulcerations and Tumours and Neurosis of the Larynx. By Prof. H. Wendt, Prof. W. Leube, Dr. O. Leichtenstern, Prof. A. Heller, Prof. H. von Ziemssen and Dr. A. Steffen. Translated by Dr. Macan, Dr. Schauffler, Dr. Ball, Dr. Stimson, J. Solis Cohen, M.D., and A. von Harlinger, M.D., Albert H. Burk, M.D., of New York, editor of American edition. 8 vo. pp. 1046. New York: William Wood & Co., 27 Great Jones street, 1876.

We received quite recently volumes vii. and xii. of this valuable work, although we believe that volume vii. has been before the public for several months. This volume treats of diseases of the chylopoietic viscera, beginning at the upper alimentary passage.

The first article is from the pen of the late Dr. Herman

Wendt, who died in October, 1875, at the early age of thirty-seven years and seven months. From the biographical sketch of his life it would appear that he was an indefatigable worker; indeed, his continuous mental labour brought on an obstinate attack of insomnia, which terminated in cerebral disease, from which he sank. His researches were chiefly in the field of pathological anatomy and histology, and his productions are described as very extraordinary. Many of his researches were on the middle ear, its anatomy both physological and pathological. The article here reproduced is on the diseases of the naso-pharyngeal cavity and their influence on the organs of hearing, of speech, of breathing and of swallowing. The anatomical alterations of the mucous membrane is considered, such as anæmia and hyperæmia, hemorrhage, œdema, parenchymatous swelling and increased and altered secretions. The author then discusses acute and chronic retro-nasal catarrh, the same of the lower pharynx, phlegmon, abscess, croupous and diphtheritic inflammation, tuberculosis of these parts, the condition in syphilis, dry catarrh, morbid growths, neuroses and foreign bodies in the nasal and naso pharyngeal cavities.

The next article is written by Prof. Leube, on diseases of the stomach and intestines. He begins by giving a few preliminary remarks on the position of the stomach, its structure, and then passes on to the physiology of digestion. The author points out the necessity of an acquaintance with the anatomy and physiology of these organs before a thorough conception of their diseases can be obtained. He then passes on to consider acute gastritis, sporadic cholera, gastritis phlegmonosa, diphtheritic gastritis and chronic gastritis. Ulcer of the stomach is the next subject taken up, and then he passes on to other conditions of the stomach, such as tumours, cancer, softening, hemorrhage, neuroses of the stomach, dilatation, contraction, anomalies in shape and position of the stomach and rupture of the organ. The remaining portion of this paper is devoted to affections of the intestines other than the stomach, and the diseases are taken up in the same order.

Leichtenstern is the writer of the next article, which is de-

voted to constrictions, occlusions and displacements of the intestines. There is a very full account, well illustrated with wood engravings of various forms of knotting, twisting and strangulation of the intestines. Referring to treatment, the author shows the advantages of operative interference in suitable cases, puncturing the intestines when much distended with gas, using for that purpose a fine exploring trocar well disinfected, and he holds that this can be done "quite without danger." The relief given to the patient is immense and sometimes permanent. Puncture of the intestines and evacuation of the flatus not only relieves the distressing distension and oppression of the respiratory organs and heart, but occasionally the very condition of obstruction is maintained by the pressure of gas from above on a twisted intestine. "Consequently the direct result of puncture in such cases might possibly be to overcome the strangulation."

The operation of laparotomy is discussed and certainly the statistical account is far from reassuring. The danger and risks of the operation are fairly laid before the reader and fully discussed. So also is colotomy both Littre's and Amussat's operation.

The next paper by Heller is on intestinal parisites. These he divides into four groups; I. infusoria, II. tape worms, of which he describes no less than nine varieties, III. leech tribe, and IV. round worms, of which seven distinct varieties are given. This paper is amply illustrated, and is a most valuable contribution to the subject of intestinal parasites.

Von Ziemssen writes the next paper on laryngitis phlegmonosa, perichondritis laryngea, ulcerations and tumours and neuroses of the larynx. The author adopts the designation of laryngitis phlegmonosa after Bouillaud for that form which runs its course in the submucous connective tissue, without however being confined thereto. He then discusses perichondric inflammation and its results. He then passes on to ulceration and tumours of the larynx, describing some special forms of disease such as lupus, lepra or elephantiasis græcorum, glanders, and syphilitic disease of the larynx. These are all destructive

ulcerative affections. And subsequently he passes on to neoplasms within the larynx, connective tissue growths such as papillomata, fibromata, mucous polypi, cysts and lipomata. Malignant disease of the larynx is then touched upon and he mentions the various methods adopted by the surgeon for the removal of these growths, mentioning also the cases in which extirpation of the larynx has been practised. The author is of opinion that this operation has a future before it, as without doubt it is justifiable under circumstances in which the patient is doomed to death, and he adheres to the opinion that the operation should be conducted at the earliest possible stage, "as soon as the diagnosis is fully established, because thereby the prospect of avoiding relapses will of course be improved." This article closes with an account of the neuroses of the larynx. This part of the paper is fully illustrated by many excellent and clear engravings on wood. Some of these are from Braune's Atlas of Topographical Anatomy. The last article in this volume is by Dr. Steffen on spasm of the glottis. We observe that this volume is printed on lighter paper than those that have already appeared, and consequently contains a larger amount of reading matter in a volume of the same size as the others. The type is all that can be desired, and the execution of the work both in a literary sense and as a work of art is in no way inferior to any of the series. As the work advances to completion its indispensable qualities as a book of reference become more and more apparent. We advise all who have not already availed themselves of the opportunity offered by the publishers to possess a cyclopedia so essential to the real student of the science of medicine, to do so without further delay.

Therapeutic use of Faradaic and Galvanic Currents in the Electro-Thermal Bath, with history of cases. By JUSTIN HAYES, M.D. 8vo. pp. 112. Chicago: Jansen, McClurg & Co., 1877.

"During my investigation of its use, *I am confident that, as an auxiliary to the treatment of the diseases of women it is a boon of greater value to her than has been discovered during*

the last fifty years." Such is the language of the author in his preface, with reference to the use of the electro-thermal bath.

From the list of diseases treated successfully by this method we concluded that all that is claimed for it in the treatment of diseases of woman must apply to the treatment of all other diseases. The following is a list of cases which he gives:

General debility, intra-mural fibrous tumour, subperitoneal fibroid tumour of the uterus, abdominal tumour with symptoms of cerebral apoplexy, epithelioma of the cervix uteri, glaucoma and premonitory symptoms of *apoplexy cerebri*, weak eyes, strabismus, anteversion with ulceration of os uteri, spinal weakness, obstructive dysmenorrhœa, progressive locomotor ataxia, acute rheumatism, sciatica, articular rheumatism, gout, areolar hyperplasia of the uterus, multilocular sero-cystic ovarian tumour, over-wrought brain, sterility.

On the use of the method which the author calls the "vitalized treatment," the following is an example of it:

"His feet were placed in a footbath at 98° Fahr. and gradually raised to 100°, (not his feet), with the negative electrode in the water, the positive electrode in a soft sponge and placed by the operator over the region of the liver, with an intensity current appreciable to the patient—from here it was passed over the right pectoralis major muscle, across the chest to the left pectoralis major muscle, down the side over the spleen to the left iliac fossa, across the lower part of the abdomen to the right iliac fossa, up the ascending colon and over the transverse, finishing the circuit over the small intestines. This was repeated twice, then the sponge was grasped in the left hand of the operator, the right hand carried slowly over the chest and abdomen, following the same course as the sponge for four or five times. Then the sponge with the positive electrode was placed on the nape of the neck, one side of the spine, and was carried down the whole length of the spine, alternating twice from side to side. This was followed by using the hand for an electrode, as in treating the chest and abdomen, carrying the hand over the spine, as well as at each side. The treatment was concluded by the patient holding the sponge with the positive

electrode for three minutes—time of treatment being twelve minutes."

Now, we would dispense with the classically derived word 'vitalized' in characterizing this treatment, and call the treatment *lively*. As an illustration of the style of composition of which Dr. Hayes is capable we quote the following euphemistic description of the fall of a medical man into an indecent style of practice: "The doctor, after receiving his M.D. in our noble profession, like the animal whose pedigree ends in its race, applied his heels to those who gave him the honourable degree, and diving down into the cess-pool of vice and indiscriminate licentiousness, 'brought up drowned honor by the lock,' wrote a book to make licentiousness more licentious, and deal death to generative molecular life—by which means he had sold his character to gain notoriety and filthy lucre."

There is an absence of scientific tone, and a carelessness in the use of medical terms in this book which, we think, will not recommend it as an introduction to the profession of a new method of treatment.

The Microscopist, a Manual of Microscopy and Compendium of the Microscopic Sciences. Third edition, re-written and enlarged. By J. H. Wythe, A.M., M.D., Professor of Microscopy and Biology in the Medical College of the Pacific, San Francisco. 205 illustrations, pp. 260: Philadelphia, Lindsay & Blakiston, 1877.

The first edition of this work was well known to us ten years ago, when beginning our microscopical studies; and as the author states in the preface, "the progress of microscopic science may be well illustrated by a comparison between the present and former editions." The comparison reflects credit upon both author and publisher, and shows us with what rapid strides the investigation of the minute structure of animals and plants has advanced in the last decade.

The work professes to be a compendium of the microscopic sciences, micro-mineralogy, micro-chemistry, biology, histology,

and pathological histology; and, considering that these extensive subjects, to each of which a separate treatise might well be devoted, are treated of in 260 pages, we do not expect any great minuteness in detail.

The first three chapters of the work deal with the microscope as an instrument, its history, construction, and the various mechanical accessories in use with it. No preference is expressed for any special form of microscope, nor do we find any precautions suggested in the choice of an instrument. A more extended reference to the student's microscopes of Hartnack, Swift, and others, which combine in a marked degree excellence and cheapness, would have been well; considering how generally they are in use, even on this side the Atlantic. The sections on the microscope in geology, and mineralogy and in chemistry are well prepared, and contain much information of value to the general student. Chapter ix gives a very good *resumé* of the structure and functions of cells; from the phraseology employed we perceive that the author is a follower of Dr. Beale.

Vegetable histology is dealt with in 30 pages, which, while they contain much that is useful, ought to have furnished much more. Thus, only three-fourths of a page is devoted to the general structure and life history of the diatomaceæ, and ten pages to a classification of them which can be of no special service to the ordinary student.

The wide field of invertebrate zoology is treated in the same superficial manner, and valuable space occupied with classification, out of place in a manual of microscopy.

The final chapters (xii and xiii) on animal histology, and the microscope in practical medicine, may be regarded as a strong extract obtained after boiling down the modern works on the subject, and as such would be of use to the medical student.

Twenty-seven tinted plates, the execution of which is good, embellish the work. It is stated in the preface that "*many* of the figures illustrating the lower forms of life, and normal and pathological histology have been drawn from the works of Carpenter, and others." It would have been more correct to say *almost all*, for we have looked in vain for original figures in

these sections. The habit of copying wholesale the illustrations of others is one we strongly deprecate, and all the more when they are not acknowledged. If an illustration is worth having it is worth acknowledging, if for nothing else, as an act of courtesy to the author.

To the numerous *dilettante* microscopists this work will be of real service ; to real workers its superficiality in many important matters diminishes greatly its value.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

An Emetic for Croup.—It may be well therefore to consider in detail the properties which such an emetic should possess—properties almost a matter of inference, the indications for use being known. First of all it should be one upon which we can rely ; it must always act and not fail. Secondly, it should, if obtainable, be of such character that if a greater or overdose be given no harm would result. This has always been a great point in favor of ipecacuanha, over dosage with which when given as an emetic is unimportant ; and a serious objection to the use of antimony, which cannot be so administered with impunity. Beck narrates a case in which " The 1-30 of a grain given to a child a year old labouring under croup, induced such severe and protracted vomiting, together with general prostration, as to require stimulants to save life." Thirdly, its systematic effects should not be too prolonged and depressing. From the general feebleness of their organization, children cannot sustain the effects of those emetics which profoundly depress the system. " On this account antimonial emetics are frequently hazardous to young children." Fourthly, it should act promptly. The element of time in these cases is all important, and such emetics as act speedily, the effects otherwise being alike,

are greatly to be preferred. Fifthly, it should be one that can be given with as little trouble and as little repugnance on the part of the patient as possible. All crying and struggling or resistance not only entails delay, but aggravates the condition of the little one by the general excitation consequent therefrom, as also by the local strain upon the parts. Such an emetic we have in the Hydrag. Sulphas Flava, a remedy long known, but much less used by the profession than its merits warrant. Baker says, " My reasons for preferring this to all other emetics in croup are the following: It acts much more promptly and efficiently than ipecacuanha or alum ; it is tasteless, and much more easily administered than either ; it does not exhaust and depress the vital power like antimony. It depletes the mucous membrane by an abundant secretion of mucus, which is thrown up ; it removes from the larynx, by the forced expiration which it causes, any albuminous or fibrinous exudation, which may be there in a diffluent state, and which by remaining may become subsequently pseudo-membrane ; it acts as a powerful revulsive, and thus diminishes the capillary circulation in the trachea and the larynx." These results he considers that the active emesis from the Turpeth mineral (Hydrag, Sulphas Flava) accomplishes much more speedily and effectually than any other agent. Its properties are here clearly and concisely set forth, and a long and successful, and in every way satisfactory experience with it, causes me to endorse it as the emetic *par excellence* for croup. The average dose for children of from one to three years of age is three grains. For infants of much less than one year it is two grains, although even to them three grains can also be given without hesitation. For children over three years of age four to five grains. If not acting in fifteen minutes, is to be repeated. Although, as with all remedies, the adjustment of dose to age should herewith be likewise observed, still the extreme care that ought not never be wanting in the use of tartar emetic is not equally demanded in the employment of the Hyd. Sulphas Flava.

As previously noted, a variety of opinions exist in reference

to the frequency with which emetics should be administered during the course of the disease, or in other words, to the advisability of their repetition. Some instruct that they should be given over and over again during the disease, evidently placing their greatest reliance upon such remedy. Others say that, emesis having been once produced, their use should then be discontinued. I think neither are right. To keep a patient constantly under the influence of an emetic would beget a depression and exhaustion in no way agreeing with the general indications, viz., a sufficient but not sthenic support of the system. To be satisfied with a single primary emisis would be to forego the invaluable effects which by the operation of emetics we are enabled to obtain. *Medio tutissimus ibis* is here to be born in mind, and an occasional emetic of the Hyd. Sulphus, Flava (say once in six or eight hours, but dependent upon the case and the grade of its symptoms) will give us the benefit arising from its mechanical action in clearing out the air passage from the abnormal secretion or exudation that has taken place, and at the sametime re-impress upon the system the beneficial effects known as systemic.—*The Practitioner.*

Massage, and its value.—Massage and its value to the physician—By a jump or misstep a man suddenly experiences a violent pain in one or both ankles ; he limps home with difficulty. Arrived there he finds around one or both malleoli marked swelling and pain ; it is no longer possible for him to walk. Here then, we have to deal with a superficial capsule or ligament rupture with moderate effusion of blood. If one is called at this time, before the effusion of blood has added to it serous effusion, the prognosis is extremely favorable.

After oiling the limb, attempt by stroking with both hands in a centripetal direction to empty the superficial veins and lymphatics so as to make more space in them for carrying off the effusion below. Then with gentle rubbing continue to approach the injured parts. These at first are somewhat pain-

ful, but stronger pressure can gradually be made upon them. Circular rubbing should then be added, while simultaneously with the other hand the vessels above should be emptied. When the centripetal and circular rubbing have been continued for about a quarter of an hour passive motion is then added, and finally the patient is told to move the foot. The sufferer is usually astonished to find how little pain is left, and how well he can move the joint ; he thinks he can at once go about upon it again. It is well now to apply a bandage, and change it every four or five hours. I do not permit such of my patients as can to walk upon the injured limb, as most of the operators with massage do, for I believe that in severe cases it is expecting too much of torn ligaments infiltrated with blood. In two cases which I treated, one kept the horizontal position to begin with, and recovered speedily and favorably : the other, contrary to my wishes, walked about after the first manipulation, in consequence of which a considerable effusion into the joint followed. In the latter case there was probably a partial or entire rupture of a small capsular artery. When possible, the massage should be applied twice daily, as by so doing a more speedy cure will be obtained. A few days generally suffice in light sprains to restore the joint to its normal condition.—*Boston Medical and Surgical Journal.*

Amenorrhœa.—Application of Electrical Current ; Recovery.—Hattie W., aged eighteen ; single ; occupation, tailoress. The catemenia, which first appeared at fifteen, were always somewhat irregular, the periods varying from four to six weeks. The general condition had always been excellent, and the patient presented the appearance of robust health. She was sent to the hospital by O. G. Cilley, M. D., who had treated her for effects caused by the ingestion of about two drachms of oil of cedar, administered by herself. As she had already undergone sufficiently active treatment, merely general treatment was adopted, and in two or three days she

recovered perfectly. As a reason for taking the drug, she stated that the catamenia had not appeared for sixteen months, and she hoped by this means to cause their return. Five days after admittance a gentle secondary current was applied to the fundus uteri in the following way: one of the terminal wires from a small battery was bound firmly to a uterine sound, and the sound passed into the uterus to the fundus. The other pole of the battery was then applied to the abdomen, just above the pubes. A mild current was then passed for a few minutes, the sound being moved freely about the fundus. On the following day the catamenia appeared, and continued for four days.

Case II. *Amenorrhœa: Electrical current; Recovery.*—Annie D., aged twenty-two; single; domestic; general appearance that of perfect health. Catamenia appeared at eighteen, and were regular until three months ago, when, from exposure to wet and cold during menstruation, they ceased, and did not again appear. On vaginal examination the uterus was found to be perfectly normal in size and position, with cervix congested, and dark purplish-red in color. The vaginal walls were also congested. The hot vaginal douche was used twice daily, and the fluid extract of gossypium, one drachm three times a day. As the desired effect was not produced, the electric current was applied fourteen days after entrance. Catamenia appeared two days after the use of the battery, and continued five days.

The above cases are interesting on account of the patients presenting the appearance of robust health, and from the fact of the affection in both cases having resisted the action of various remedies prescribed before their entrance. By the hospital records we find cases similar to the above discharged not relieved or only partially so after long courses of tonics. It would seem also that if possible the current should be applied directly to the fundus uteri, as good results are gained in this way in cases which were not affected by a current passing from the pubes to the sacrum. Various authorities, as Althaus,

Beard and Rockwell, Thomas, Golding Bird, and others, recommend the electrical current in cases of this nature; and certainly in otherwise healthy patients, where the disorder is not caused by structural disease or mechanical displacement, it seems capable of giving the best results.—*Boston Medical and Surgical Journal.*

Incipient Phthisis.—The attack began in this case, that of a sailor, twenty-four years of age, with a slight, dry, hacking cough, some two years and a half ago. Six months after that date, when at work on shore, he had a severe hemorrhage and lost a pint of blood. The hemorrhage was followed by fever and an increase of the cough, which however soon subsided, and he returned to his work. Six months later he had another hemorrhage larger than the first. Again the same improvement occurred, to be again followed, after another six months, by a third hemorrhage. One month ago he had a fourth hemorrhage, and later still he has had two or three slighter ones. *Throughout these two years and a half the mucous secretion has been scanty and the cough dry.* There has been but little loss of flesh. Epistaxis has occurred several times. The patient exhibits no cardiac, or gastric symptoms. The pulse is 96 and the temperature normal, with the daily fluctuation of half a degree. There is thick, tenacious mucus on the posterior wall of the pharynx, the mucous membrane is congested and the tonsils enlarged. Physical examination shows a symmetrical, non-phthisical chest, with good expansion, though there is a little less motion at the left apex than at the right. There is no contraction and no increased vocal fremitus. Percussion is healthy on both sides, with the exception of a very slight elevation of pitch and a little less volume at the left apex. Auscultation shows a slightly weaker expiratory murmur, with prolongation of expiration at the left apex. There is evidently a disposition to hemorrhage from the mucous surface. It is impossible that such large hemorrhages as he has had should have come from the fauces or larynx. They may

however, have come from the bronchial mucous membrane, and have been due to acute congestion of the left apex.

The diagnosis must be considered finally, not only as regards the preexistence of local lesions, but also as regards vital tendencies and the significance of such lesions. In this aspect we may conclude that our patient has a very slight degree of condensation of a portion of the left apex, due to repeated congestions, and some degree of subacute inflammatory action, but without true tubercular formation as yet. It is in just such cases as this that exact diagnosis is of vital importance although it is attended with difficulties that are absent when the disease has advanced to the later and less curable stages.

There is no doubt that even large hemorrhages may occur from the mucous membrane of the bronchial tubes, without pre-existence of any disease of the lung tissue. In some cases, too, it appears that the occurrence of such a hemorrhage seems to excite an irritative process in the lungs, which in subjects who are predisposed to phthisis, may result in chronic destructive lung disease. In such instances, of course, the initial symptom would be the hemorrhage taking place, perhaps accidentally, in the midst of ordinary health. That there is needed a constitutional or local predisposition to disease, in addition to the hemorrhage, may be learned from the numerous cases where even large and repeated hemorrhages occur without the supervention of phthisis. Thus I believe that the importance of hemorrhage as a cause of phthisis is much exaggerated by a certain class of pathologists. On the other hand, with the existence of even a very small amount of lung disease, hemorrhages are very apt to occur, probably as the result of severe congestion. Thus, in the present case, it is for us to consider whether there has been a small amount of subacute local disease all along, and that the hemorrhages have occurred from temporary broncho-pulmonary hemorrhages, or whether the hemorrhage was its first phenomenon, and the local disease was induced by it, and has been increased by each subsequent hemorrhage. In view of the history of dry cough, preceding the first hemorrhage for six months, and of the rapid return to the previous

condition which followed each hemorrhage, I am inclined to take the former view. In like manner, cough deserves careful study, as an early symptom of phthisis, although, owing to the frequency with which chronic cough is due to fancied laryngeal or bronchial irritation, much care is needed to determine its true significance. The cough in incipient phthisis is usually short, hacking and painful, and is at first dry, and continues thus without expectoration, for a variable time, weeks or even months. Expectoration, when it begins, is apt to be at first of glairy mucus, later of whitish and thicker mucus, and then of whitish, yellow, muco-purulent matter. True, solid, purulent sputa rather belong to a later stage. These symptoms we have thus alluded to, and even the detection of physical signs of slight localized change at one apex, can only have their true value given them, when viewed in connection with the general constitutional symptoms. In the present case, both the local and general symptoms are exceedingly slight.

The local signs are usually found at the upper part of one lung. They depend on the development of little centres of disease—tubercles, a peculiar type of lymphoid tissue—growing from either the connective tissue elements or the alveolar epithelium of the minute bronchioles. Each tubercle cuts off partially the supply of air from a colony of air vesicles, and thus impairs expansion. On auscultation this same cutting off of air makes the inspiration feeble. The inspiration may be not only weak, but also jerky. The air has the same difficulty in getting out, so expiration is more prolonged. Percussion ought to show less resonance over the affected spot, but this frequently amounts only to a slight elevation of pitch and loss of volume, which, when at the left apex, as in this case, are with difficulty appreciated, on account of the slight natural difference between the right and left apex.

Among general constitutional symptoms which afford means of diagnosis may be mentioned loss of flesh, debility, increase in rapidity of pulse, and elevation of temperature. Marked general emaciation always means that something serious is the matter. It may be the result of impaired digestion, but if the

patient eats heartily and still loses flesh, there is something vitally wrong going on. If flesh keeps up, even when other decided symptoms show themselves, there is more reason to hope that the local lesion may not be of truly tubercular nature. Loss of muscular strength, unless it be very marked, is not so important as a symptom, as loss of weight, for muscular weakness may come on from temporary causes. Getting out of breath easily may be merely a symptom of debility, or a symptom of organic lung trouble. Rapidity of pulse is exceedingly valuable as a rational sign. The normal pulse is 72, but it may vary from 54 to 86 with perfect health. Persistent and sustained increase in pulse rate, however, without cardiac disease, is apt to indicate serious constitutional irritation due to some local lesion. Elevation of temperature always means increased tissue change. It may, in the earliest stage, not be greater than half a degree. There is no more important symptom than this last, and it usually sets in long before the physical signs become evident. Temperature differs much in different people with the same amount of lung disease. We must, therefore, always take into consideration the individual idiosyncrasies of the case under treatment, before reaching a final conclusion.

The treatment of such cases as the one now under consideration, where there is slight impairment of one apex, and an accompanying liability to chronic, but not tubercular, phthisis, may be entered into, and carried on, with great hopes of permanent cure. Among the most important hygienic measures, are good food, healthful out door exercise, which will expand fully the chest, and an equable climate, such as may be found in the south of California, New Mexico, or the southern and Western slopes of Colorado. Sea voyages, such as a cruise to some tropical ocean, and not sailing about in some inclement climate, as many consider the term to mean, are often most plainly beneficial. If these ways of regaining lost health be out of the question, and the patient be compelled to stay at home, inhalation of compressed air may be tried with success; counter-irritation may be applied over the seat of disease, and cod liver oil, the syrup of

the iodide of iron, arsenic, and the hypophosphites of lime, soda and iron administered internally.—*Medical and Surgical Reporter.*

Fractures of the Lower Extremities.—To recapitulate.—You must have the whitest, finest, cleanest cotton batting, the smoothest and freshest plaster-of-Paris, and a lot of roller bandages made of the cheapest and flimsiest cotton cloth, such as is used for lining comforts or covering cheese. After getting the cloth have it well washed and dried. Tear it then into strips of two and a half or three inches in width and into two different lengths. One should be nine or twelve yards long. The remainder should be but three yards long. Lay these latter on a kitchen-table or board, and have the dry plaster well rubbed into the cloth. Roll them now as evenly as you can. Have an ordinary wash-basin, one-third full of water a little warm. Put into this two heaping tablespoonsful of powdered alum. Have the whites of half a dozen fresh eggs beaten into a froth. Open out the batting carefully, that it may be in a sheet rather than a roll. Envelope the broken limb in this. Be particular that the bony prominences are well covered. Secure the cotton with your long roller, into which, you will remark, that you have rubbed no plaster. Put your plaster rollers into the basin of water. Squeeze and press them with your hand, that they may be well wetted. Apply these to the limb one after another, until you think you have made the dressing sufficiently firm. I think you will find three layers usually sufficient. You may apply the fourth immediately over the seat of the fracture. As you proceed you may put the rollers on longitudinally instead of circularly. You observe we make "no reverse" turns of the bandage. They are unnecessary; indeed they give the dressing a clumsier appearance than it otherwise would have, and are in that at least objectionable. As you apply each layer of bandage smooth it nicely with your hand. It will add to the firmness of the dresssing and make it dry more quickly. Having put on as many rollers as you care

to, and smoothed them well, wait a few moments for the plaster to dry. The alum you have added to the water will greatly facilitate this. When comparatively dry apply the whites of the eggs over the plaster. Now apply a roller without plaster over this; or if you prefer cut the roller into strips, and lay them along the length of the limb. The purpose of the egg is to prevent the plaster from chipping. The purpose of the additional roller is to assist in this, and to give to the dressing a finish which it does not otherwise have. Besides this the whites of the eggs will be a great convenience to you in enabling you to cleanse your hands of the plaster. They are better than any soap or any amount of water. Indeed they are the only substance I know of which, if you work much in plaster, will prevent your hands from chapping and becoming harsh and rough.—Dr. YANDELL.—*Louisville Medical News.*

Gastrotomy.—Dr. Lannelongue read the notes of a case of gastrotomy before the Academy of Medicine. The following is a résumé of the paper. A man 59 years of age, without hereditary antecedents, and up to this time in the enjoyment of good health, was seized suddenly with pain in deglutition, which progressively increased, till on his entrance into the hospital, six months after the beginning of the affection a few spoonsful of milk could scarcely be swallowed. A very resistant and absolutely inseparable obstacle was made out about the middle of the thoracic portion of the œsophagus. The emaciation was extreme, but there was no cachectic taint; all the other organs were healthy. There only remained, as a last resort, to prevent the patient dying of inanition, the operation of gastrotomy. It was performed with all the precautions recommended by Professor Verneuil, in his interesting communication to the Academy of Medicine, on the 31st of October, 1876.

The operation was followed by neither pains nor inflammatory accidents. The feeding was done regularly through the fistula, which, however, allowed a considerable quantity of liquids to escape, when some thoracic accidents supervened which carried off the patient on the 26th day after the operation.

At the autopsy, it was found that the primary lesion of the œsophagus (epithelioma), had determined a bronchial perforation, from which had resulted the asphyxial phenomena which had led to death. But the stomach was firmly adherent to the abdominal wall. The gastric fistula was well formed. The success of the operation was complete. M. Lannelongue concluded this interesting communication by the following reflections:

(1). Gastrotomy is a rational operation founded on the history of gastric wounds and fistulas made experimentally in animals or produced accidentally in man.

(2). It is indicated at all times that aphagia renders death imminent by inanition.

(3). The operative details should conform exactly to the rules indicated by Prof. Verneuil. One of the principal points of which consists in only opening the stomach after having firmly fixed it to the abdominal wall by the minute application of numerous points of suture, in order to avoid all immediate or consecutive escape of fluid, into the peritoneal cavity.

Some modifications of detail might be added as follows:

(4). In the incision of the integuments not to pass downwards beyond the inferior border of the left eighth costal cartilage, in order to arrive more directly on the anterior wall of the stomach, which is always shrunken and drawn up, against the diaphragm, in consequence of a long abstinence, in cases in which gastrotomy is called for.

(5). To open the anterior wall in the neighborhood of the short curvature, in order that the liquids secreted or injected, finding in a dependent part a sufficient space in which to accumulate, may not escape by the opening.

(6). Not to apply to the edges of the gastric aperture, either hemostatic forceps, or threads to pin the sound left in the opening. Such measures expose to tearing and to mortification, whence results an ulterior enlargement of the fistula which facilitates the escape of liquids. — *Gazette Hebdomadaire*, 13th April, 1877.

Two Cases of Menstruation during Infancy.—The first occurred at the age of three years, in a child born of healthy parents.

At the age of two years and seven months menstruation first made its appearance and recurred every three or four weeks, lasting three or four days each time. The infant appeared in all other respects to be in the enjoyment of perfect health, and is now three years and six months old, well developed with well formed breasts, and a slight development of hair on the pubes. Its mental development about equal to that of ordinary children of a similar age

Menstruation præcox is of rare occurrence if we may be allowed to judge from the literature of the subject. It would also appear to happen more frequently between the ages of one and seven years than during the few years immediately preceding puberty. No satisfactory explanation of the phenomenon has as yet been given, and there are many inaccuracies in the statement which have been made from time to time concerning it. The second case reported by Bouchut occurred in the fourth child born of healthy parents. The family consisted of six children, all of whom were unusually strong and well developed from the very day of birth.

Menstruation first appeared at the age of two months, and has continued regularly ever since every four weeks, lasting two to four days each time. When it is about to come the child experiences some discomfort, and the strongly developed breasts undergo considerable enlargement; she presents the appearanee in miniature, of a woman of perfect sexual development, is of unusually grave deportment, and in playing with other children usually takes a motherly part. Bouchut calls attention to the rarity of these cases, and is of the opinion that ovulation does not take place; he thinks with G. William, that the menstruation is due to simple uterine congestion.

O. Wachs notices a case of premature menstruation in a child of three years of age.

Bouchut on "Puberté precoce et Menstruation régulière" in an infant aged 22 months. Quoted in the *Centralblat f. Med. Wissenschaften*, No. 10. March 10th, 1877.

How to prevent Hæmorrhage.—(How to prevent hæmorrhage after the removal of Esmarch's Bandage. Dr. RIEDINGER.—*Deutsche Zeitschrift fur Chirurgie*, XXVI., 5 and 6.

The greatest disadvantage attached to the use of Esmarch's bandage, is the profuse hæmorrhage following the removal of the elastic band. The hæmorrhage in profuseness depends upon the force of constriction, and the length of time which it is allowed to remain. The amount of blood lost in many cases is often more than that following digital compression.

Esmarch himself admits that there is considerable capillary hæmorrhage after the removal of his bandage, but thinks that it is easily stopped and of no long duration.

The author mentions the names of many eminent surgeons, who have seen the most profuse hæmorrhage after severe operations, particularly after amputations: the blood pouring out of the wounded surfaces as if from a sponge.

Various surgeons of England, France and Germany are mentioned, all of whom have had unpleasant experiences with this secondary hæmorrhage.

The author believes that hæmorrhage is caused through paralysis of the vaso-motor nerves; further, that through the constriction, the blood being forced entirely from the part operated, upon no coagulation of the blood takes place.

Various means have been tried to check this hæmorrhage, but they have, as a rule, not been very successful, *e. g.*, cold applications, ice, ice-water; but the hæmorrhage persists in spite of these applications often fifteen minutes, and sometimes one-half to one hour.

Esmarch recommends the ligation of every blood vessel, veins as well as arteries.

P. Bruns has ligated as many as thirty-six vessels, and still had hæmorrhage. Bardeleben has ligated all arteries mentioned in anatomy, and those vessels presenting themselves to the eye, arteries and veins, and still had considerable hæmorrhage.

The author has performed experiments on animals to see whether the sensibility of the nerves was entirely overcome by

the constriction of bandage. The reaction upon applying electricity was quite apparent, and from this he was led to apply electricity to the nerves which supply the vessels of the part operated on; his results were quite satisfactory, so much so that he recommends the application of electricity before the removal of the bandage. He uses the induced current. The poles to terminate in sponges; one pole to be placed on the wounded part the other electrode to be passed over the nerve or nerves which distribute branches in the bandaged part, he has succeeded in reducing the hæmorrhage to a great extent.—*Chicago Med. Journal.*

Extirpation of Bronchocele. — Bruberger records a case of total enucleation of a hyperplastic thyroid gland, weighing 375 grms. (11.7 oz.) in a man 18 years of age. The enlarged organ had compressed the trachea on both sides, causing intense dyspnœa. The operation was rendered difficult inasmuch as the patient had to sit up and could only take chloroform at intervals. The hæmorrhage was slight, and under antiseptic treatment the large wound was in a few days healed, a small fistulous opening only remaining, and the patient got up on the 6th day.

Statistics are given of all cases hitherto published, from which we learn that of 82, in which the whole tumour was removed—but probably not the whole thyroid; 28 died; of 17 cases in which the total extirpation was certain, 2 died; 25 partial excisions, 5 died. The entire mortality amounts to 27 per cent. and it appears that the removal of the entire thyroid, if more difficult was not more dangerous than partial excision. The latter operation should always be undertaken when only a single lobe of the gland is affected. The etiology of the partial degenerations of this gland is still unknown. In unsuccessful cases the fatal result is due to excessive loss of blood during the operation, or to subsequent inflammation and suppuration. The use of antiseptic treatment is beneficial.

Symptoms of pressure on neighboring organs form the chief indication for operation, and even the large size, broad base,

and deep position about the jugulars of the tumour, advanced by Lücke as contra-indications, are not so in in reality, for the impending suffocation will itself necessitate an operation, not without danger.—*Deutsche Militärarztt. Zeitcher.*—Quoted in *Clbt. f. d. Med. Wissen*, No. 2, 1877.

Jaborandi in Bright's Disease.—Bruen. (*Philadelphia Medical Times*, April, 1877). — Jaborandi as a remedy in Brights' disease, has found great favor with Dr. B., who reports seven cases successfully treated with the drug. He found prompt relief following the administration of an infusion of ℥ii to ℥ii of water, the entire quantity given in one or two hours. About one hour after taking the tea, patient is usnally bathed in perspiration, dyspnœa if any present caused by fluid in the pleural cavity, is relieved, and the general condition of patient much improved. So thoroughly convinced is the author of the value of this remedy in dropsies, that he urges the profession to make use of it in private practice.—(W. F. L.)—*Chicago Medical Journal.*

Pulsatilla.—(Wenzel. — *Louisville Medical News*, March, 1877.)—There are two preparations of this drug, the German tincture, and the American Fluid extract. The tincture is chiefly used, and in ten-drop doses three times daily for several days, will produce the same results as small doses of hasheesh. In increased doses it causes frequent micturition and hœmaturia. Forty-drop doses of the tincture will cause violent headache, nervous excitement and bloody stools. Severe headaches that have resisted all other remedies, will, the author says, receive benefit by from three to ten drop doses of the tincture three times daily for one or two weeks. He believes it acts directly on the nerve centres, and principally on the cerebrum. Great care shonld be exercised in administering pulsatilla, because of its poisonous qualities. Dr. W. claims that wherever a nerve-sedative is required, no remedy is equal to it.—W. F. L.) *Chicago Medical News.*

CANADA

Medical and Surgical Journal.

MONTREAL, JUNE, 1877.

REGISTRATION OF FOREIGN AND COLONIAL DEGREES.

The general Medical Council of Education and Registration of Great Britain opened its annual session in London on the 10th May, ult. The inaugural address was delivered by Dr. Acland, F.R.S., the President of the Council, and amongst other topics of interest he touched upon the relations of the Board of trade to Canadian surgeons serving on ships sailing to and from Canadian Ports. Indeed it would appear that the subject of the recognition of Colonial degrees has occupied the attention of the Council at successive meetings of that body ever since the year 1861, and the secretaries of state in successive governments have pressed upon the Council the necessity of dispensing with, or greatly relaxing its regulations in reference to persons holding Colonial diplomas or degrees. And it was added that this condition appeared to be a *sine qua non* to the consent of the Government to the introduction of any bill of amendment to the Medical Act. This statement by the President of the Council is very satisfactory, and we trust that the matter will be arranged on an equitable basis.

The condition of Colonial institutions appears to be indifferently understood. It does seem an anomaly that institutions working under Royal charter should be denied privileges of such vital importance to them as the recognition of their degrees. Their graduates hitherto have been simply ignored, or rather outlawed so far as the mother country is concerned. Surely there is no fear on the part of the Colleges and Universities of

Great Britain, that their effulgence would in any way be dimmed by the bright scintillation of a Colonial school. Therefore, we say why not register Colonial degrees? Let the graduates appear as hailing from such or such a colonial university or college. If the Colonies were manufacturing doctors by the cord then, indeed, might the medical defence association take alarm and fear that their very existence was threatened. It has just occurred to us that this method of enumerating quantity may not be understood by our English friends, and we would in explanation remark, that in this wooden country of ours we purchase wood by measurement, and what constitutes a cord of wood with us is a pile 8 feet long by 4 feet high of the full length of the stick as it is cut from the tree.—But, to be serious, as this is a matter which is somewhat above levity.—There are in Canada but two institutions whose qualifications entitle a man to practice his profession legally in this country, and as the yearly number of men licensed by each board is on an average about 40, it cannot, therefore, be said that Canada is flooding the country with indifferently qualified men.

In Ontario the College of Physicians and Surgeons of that Province is exclusively an examining body. They admit no man's degree or qualification before he has satisfied the board by actual examination that he is qualified to enter the profession. Of course a regular curriculum is demanded, and also evidence of having passed an examination on preliminary education before entering on his medical studies. These alone form the qualifications which entitle the candidate to examination, and after having passed that examination he is entitled to register all the degrees or diplomas of which he may be possessed. In Ontario they possess a single door of entrance to the profession through which all must enter; all qualifications are regarded as mere evidence that the candidate has in a *bona-fide* manner passed through a regular course of study, but the fact of his being a graduate of Toronto or McGill, or Laval or any other university or college does not exempt him from examination touching his professional knowledge.

Dr. Acland in his address states: "I am informed that

English practitioners are re-examined in Canada prior to their legal registration in the Dominion." In this he is right so far as the Province of Ontario is concerned, although we believe that the action of the Ontario board will be modified, and that Ontario is ready to admit to registration the holders of British diplomas, so soon as members of their college are admitted to registration in Great Britain.

In the Province of Quebec we are under a totally different regime. The profession is incorporated under the name and style of the College of Physicians and Surgeons of the Province of Quebec. Every third year the college meets and elects 40 governors, who are by the terms of the act constituted the Provincial Medical Board. The license of this board alone qualifies a man to practice his profession. At the time of the issuing of the license, the candidate has to enter his name, age, residence, and his qualifications, in the register of the college.

The candidate must be possessed of a degree or diploma from any one of the universities or colleges mentioned in clause IV of the Act, to wit: The University of Laval, the University of McGill, the University of Bishop's College, and the Incorporated School of Medicine and Surgery of Montreal in affiliation with the University of Victoria College; furthermore, "The Provincial Medical Board shall have the power or option of extending the same privilege to holders of Medical degrees or diplomas from other British and Colonial universities or colleges." This act is a local act operative only in the Province of Quebec; and the four teaching bodies above named are subject to visitation by assessors appointed by the Provincial Medical Board, whose duty is to attend all professional examinations, and report on the character of those examinations, and should such report at any time be adverse to any of those universities or colleges then shall the Provincial Medical Board refuse to issue its license to holders of a diploma or degree from such university or college so reported upon, until the character of the examination is changed. We may remark that this system has prevailed in the Province of Quebec ever since the year 1847, if we except the right of visitation which has only recently been obtained, and we may

state furthermore, that British graduates have always been admitted to registration by the Provincial Medical Board of this Province, without any question of examination, on presentation of a diploma from a recognized university or college in Her Majesty's Dominions. Such has been the invariable custom, and such good honest custom will, we hope, be continued. We are sorry to observe that the Medical Council of Education and Registration of Great Britain has apparently been forced into the position by their Government. Allowing a large margin for British apathy and conservatism, we do think that sixteen years is possibly a long period for such a question to be an annual and apparently unpalatable refreshment. Let us hope that it will be gulped down now, and duly digested, in fact, we can announce that the following resolution was passed on the 17th ultimo, prior to the adjournment of the Council. "That the Medical qualifications granted under legal authority in any part of Her Majesty's dominions outside the United Kingdom, and entitling to practice in such parts, should be registrable within the United Kingdom on the same terms as qualifications which are granted in the United Kingdom, but in a separate and alphabetically arranged section of the register." This we suppose is the recommendation of the Council to the Parliamentary Committee, if such exists, to whom the Medical Amendment Bill has been referred. This is as it should be, Science is cosmopolitan. The science of medicine and surgery in its application knows no country or creed. It is a Royal Priesthood, having for its sacrifice that of self to the necessity of fellow mortals.

MR. LISTER AND KING'S COLLEGE.

We have received a note from a friend in Edinburgh, who announces that it is definitely settled that Prof. Lister takes the chair at King's College Hospital, London, rendered vacant by the death of Sir W. Fergusson. The authorities of King's College had made overtures to Prof. Lister to induce him to accept the position, which he had declined. Lister being a member of the General Council of Medical Education and Registration of Great Britain, the recent meeting in London

called for his presence in the metropolis, and it was on this occasion that overtures were received and we suppose accepted.

We certainly think that it is very desirable to secure the services of a man with the originality of Lister in the metropolis. But furthermore, he will have greater scope and many more opportunities of spreading his antiseptic doctrines in London than in Edinburgh. So that this may be regarded as an important gain to the antiseptic practice of surgery not alone in London but throughout the world. London is the centre of surgical as well as other learning, and Lister in London will do far more good and be of far greater benefit to the human race than he would have been in his dearly-loved Edinburgh. Should this change be in verity carried out a vacancy will be created in Edinburgh, over which there will be a struggle. The candidature, we have heard will rest between Mr. Annandale, Joseph Bell, Watson, and Chiene, all attached to the Edinburgh Royal Infirmary, and in all likelihood Buchanan of Glasgow. We also learn that it it definitely settled that Dr. Fraser will be appointed to fill the chair vacated by the resignation of Sir Robert Christison.

McGILL UNIVERSITY.

The following changes have been made in the curriculum of the Faculty of Medicine :

(1). A practical examination in anatomy will form part of the Primary Examination.

(2). Medical and Surgical Anatomy will form part of the practical examination by the Clinical Professors.

(3.) The attendance upon the lectures in Hygiene is compulsory.

(4). Students may present themselves for examination in Materia Medica at the end of the second year.

(5). The section in clause 9 of the Qualifications for the Degree in Medicine relating to the Thesis or Inaugural Dissertation is cancelled.

(6). Eighteen months' Hospital attendance is required instead of twelve.

(7). A certificate of having compounded Medicines for six months' is necessary to qualify for the Degree.

PRESENTATION TO DR. CHAMBERLIN

OF FRELIGHSBURG.

A most pleasant incident transpired at the semi-annual meeting of the College of Physicians and Surgeons of the Province of Quebec, held on Wednesday, the 9th, ult. It appeared that that day was the 50th anniversary of the admission to the practice of medicine of Dr. Joshua Chamberlin of Frelighsburg, who is still a member of the Governing Board of the College, and who had served as President of the College during the term from 1865 to 1868. Dr. Chamberlin has been one of the most active members of the Board, and has served as a Governor of the College since its first inception in 1847. But more than this he is a general favorite amongst his younger brethren, and highly respected by all who know him. It was therefore a matter of no surprise, but was hailed with satisfaction by all when it became known that this fitting occasion was to be made use of by the Governors of the College to present to the worthy Doctor a series of congratulatory resolutions,—these we give below for the benefit of our readers, and we most heartily endorse the sentiments expressed

Moved by Hon. Dr. CHURCH, M.P.P., seconded by R. P. HOWARD, M.D., &c., Vice-President of the College, that

Whereas, Dr. Joshua Chamberlin, one of the original members of the College of Physicians and Surgeons of Lower Canada, and President of the College during the term from July, 1865 to July, 1868, has this day reached the fiftieth year of his admission to the practice of his profession : be it therefore

Resolved,—That this College begs to tender to him its earnest congratulations on the occasion.

Resolved,—That Dr. Chamberlin, from the inception of this college in the year 1847, has always manifested a zeal in its welfare, which has largely contributed to its success. That his example for courtesy, efficiency and integrity will ever remain a model worthy of imitation.

Resolved,—That the College wishes him length of years to enjoy the close of a long and honorable career.

Resolved,—That these resolutions be entered in the minutes of this day's proceedings, and that a suitably engrossed and authenticated copy be presented to Dr. Chamberlin by the President.

REMARKS

ON

VACCINATION

BY

WM. H. HINGSTON. M.D., D.C.L., L.R.C.S. EDINR.

Member of the Imperial Leopold Academy; Société Médicale All. of Paris;
Pollichia of Bavaria; Hon. Mem. Gynecological Society of Boston,
&c., &c.,
Surgeon to Hotel-Dieu Hospital; Consulting Surgeon to
Woman's Hospital and Montreal Dispensary;
President Canadian Medical Association;
V.-P. Internat. Medical Congress.

Chairman of the Board of Health.

MONTREAL:

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87 St. James Street.

1876.

VACCINATION.

Address by His Worship the Mayor, Wm. H. Hingston, M.D., Chairman of the Board of Health, to the Public Vaccinators, and other Physicians and Citizens, on Friday the 20th October, 1876:

Gentlemen: The prevalence of small-pox in this city, disturbing its tables of mortality; affecting its reputation; and injuring its trade; has rendered it necessary that more than usual efforts should be made to eliminate it from our midst. Large and airy hospitals are established, where every care and attention are secured to those who are admitted. It is hoped personal and selfish,(if not patriotic motives alone) will induce those afflicted with the disease to isolate themselves, and seek comfort and alleviation within their portals; and not continue to be sources of danger to others. But such isolation as can be secured is unequal to arrest the progress of the malady without the prophylactic means which science has secured to us. Your services, gentlemen, have been invited for that purpose, and to you is entrusted the important task of vaccinating throughout the city generally.

While having every confidence in your thorough fitness for the important work; that you may pursue a common course of action I have prepared a few rules for your guidance. They have received the sanction of the Board of Health to which I submitted them at our meeting two days ago; and will, I venture to hope, be found sufficiently clear and distinct for the purpose for which they are intended.

BOARD OF HEALTH.

INSTRUCTIONS TO VACCINATORS.

1. Do not act by deputy, but vaccinate, either by yourself, or by some fully qualified medical practitioner as your substitute.
2. Vaccinate only subjects who are in good health, with prima via in good order ; and with no eruption behind the ears, or elsewhere on the skin ; nor any febrile state.
3. Do not vaccinate a subject to whom, from the state of health, vaccination may prove injurious.
4. The Board is responsible for the purity of the lymph furnished in the first instance ; but as you are strictly responsible for the quality of whatever lymph you gather for further vaccination, be careful to take it only from subjects who are in good health, and free from eruptions on the skin.

N.B.—Good lymph is liquid, clear, limpid, translucent, sometimes slightly yellow, and moderately viscid, and should flow slowly from the punctured vesicle as a syrup, and collect into a globule.

5. Take lymph only from well characterised uninjured vesicles, and not from cases of re-vaccination.
6. Take it when the vesicles are plump, (this is usually on the 8th day) and within twenty-four hours after the areola has begun to form.
7. Avoid draining any vesicle which is punctured.
8. If any undue local irritation arises in more than one case vaccinated from the same lymph, desist from employing it any further.
9. If the supply of lymph ceases or becomes unsuitable, procure a new supply from the cases already vaccinated, or from the Board of Health.
10. Vaccinate from arm to arm when practicable.
11. If the crust be used, it should not be taken from the arm before the 21st day : or better still, wait till it is quite loose.

N.B.—The crust should be of a dark amber color, and semi-transparent. It should not be too thin nor brittle, but should cut easily, and without fracture, and be the product of an undrained or uninjured vesicle.

12. The Lancet used for vaccinating must not be employed for any other surgical operation.

13. Note particularly, in each case, the source from which vaccination is done.

14. The system should be throughly protected by the production of at least four vaccine vesicles.

15. Carefully fill up the blank Certificate furnished, of those vaccinated; or furnish a card to be forwarded to the Health Office for those willing to be vaccinated, but who prefer their family Physician; or note name and address for the information of the Board of those unwilling to be vaccinated by any one.

WM. H. HINGSTON, M.D.,
Chairman.

I. C. RADFORD,
Secretary.

It has been suggested to me by some of your body, that, in addition to the above, something might be said to meet the objections urged by those active. but mistaken writers, against the practice of vaccination. Had similar articles been written against the practice of setting fractures ; of reducing dislocations ; or of removing dead parts from living bodies, I should have thought it useless to reply : for if surgeons contend that a dislocated bone should be reduced, the profession —I speak of its more experienced members—is almost equally unanimous in favor of the practice which some so persistently, and so unfortunately, denounce. It is something to array oneself against the general belief. To follow quietly in the footsteps of those who, in all things else, medical, are our guides, brings with it, to the mind, less *éclat*, than to take up arms in what may be considered a safe warfare—safe, perhaps, to the combatant, but fraught with terrible mischief to those most interested. To prove to the unprejudiced that vaccination exerts a protective influence over the economy would be an easy task, for the writings of thousands, from the time of Jenner to our own day, are before us for the purpose ; but to attempt to convince those who persistently close their eyes to the overwhelming evidence of almost every country and government in the world, including our own, would be as fruitless as was the effort to convince the disbeliever in matter of the reality of the missile which almost knocked off his too unyielding head. In deference, however, to wishes expressed, and suggestions offered at a meeting on Wednesday last, I venture some observations on this disease, now unhappiely too prevalent, and on the means which science has furnished for its prevention.

Small-pox has its periods of dormancy, and its

periods of activity, at one moment overspreading a district, and at another disappearing. It is fatal in direct ratio to its epidemic character. Cases occuring sporadically (here and there in spots), are not so fatal. It is the most contagious of all diseases ; and this is a point on which I wish to insist ; for some industriously endeavor to circulate the belief that small-pox drops upon individuals as rain drops from heaven—touching this one and sparing that ! It is communicable in every way : by inoculation, by breathing a contaminated atmosphere, by the contact or vicinity of fomites. It is infectious in the early febrile stage ; infectious before and during the eruption ; and infectious "so long as any of the dry scrabs resulting from the original eruption remain adherent to the body" It may be caught, therefore, from the living body ; it may be caught from the dead body ; or it may be caught from clothing and furniture near the living or the dead body. So much has this foul disease been dreaded, that different nations in times past endeavored to mitigate the malady by communicating it artificially. The Brahmins in India engrafted the virus ; so also did the Turks ; and the Chinese were in the habit of putting some of the crusts into the nostrils. The practice of inoculating with small-pox virus became more or less general in Europe ; and its efficacy in mitigating the severity and the danger of the disease was considered to be very great. While it is estimated that one third of those who take the natural small-pox die, not more than three or four in a thousand are destroyed by the ingrafted disease. (Curschman states it to have been about two per cent.) But the time for small-pox inoculation is past, the law having wisely forbidden it,

Eighty years ago a chance observation was matured into a rational and scientific form by a mind deeply imbued with the best principles of sound philosophy; and a disease, mild in form, and safe in character, was substituted for the inoculation of the Turks and Chinese. In 1798, Jenner published his first important paper. In 1799 the first public institution for vaccination was established in London; in the following year it was introduced into France and Germany; and the practice of vaccination has now become general over the whole educated world. Here and there, as might be expected, it has met with opposition; but every objection that has been urged by the anti-vaccinator has been answered again and again by the leading minds of the profession. So much is this the case that I feel I owe something like an apology to my medical brethren for writing affirmatively of a practice which most of them endorse. I spoke a moment ago of Jenner as a discoverer; but Jenner did not discover vaccine any more than Watt discovered steam. He noticed the prevalent belief among the peasantry in the immunity from small-pox enjoyed by farm servants and milk maids; and little by little he drew the conclusion which has been so pregnant with benefit to mankind. The belief in the existence of a vaccine virus was not confined to England. Cow-pox and its relations to small-pox had been noticed long before on the continent of Europe; * and in France and Germany numerous experiments had been made, prior to the time of Jenner, to show that persons affected by natural

*Doctor Michea published an article some years ago proving that Vaccination was known to, and practised by the Hindoo physicians; and gave an extract from the Satega Grantham (a sacred book attributed to Dhanwantari) in support of his assertion.

vaccine virus were not susceptible to the small-pox influence. Jenner's merit consisted chiefly in *producing* the virus at will, and in diffusing it. at pleasure, for our advantage And how slowly and how cautiously he advanced his every statement. may be gathered from the fact that twenty-two years elapsed between his first experiment and the promulgation of his theory. He was assailed then, as his memory is to-day; but with more excuse then than now, for no one having the leisure and the disposition to read, and having access to the records of medical observers, has now the shadow of an excuse for rejecting the theory then advanced, the critical acuteness of which, says Curschmann, may serve as a model. But we do things differently now-a-days, and a harangue in a market place or public square, by gentlemen who may, 'tis true, be authorities in *law*, but cannot be accepted as such in medicine, is deemed sufficient to introduce the uninitiated to a knowledge of one of the most difficult and abstruse subjects in the whole range of medical science. I shall not allude to the members of my own profession who have chosen so far to forget what is due to their own dignity, and the dignity of their calling, as to select such an arena for the dissemination of their fatal errors.

As the times are as pregnant with mischief, as the air is with the disease, I proceed to ask and to answer questions asked and answered a thousand times:

1st. Does vaccination confer a certain degree of protection against small-pox?

2nd. Are the effects of vaccination permanent?

3rd. Is there risk of lighting up local inflam matory action?

4th. Is there risk, when vaccinating, of inoculating the system with scrofula, or other hereditary disease?

5th. Is there risk of contaminating the system with syphilis, or other acquired disease?

The answers to these questions will, I think, cover the ground gone over by the anti-vaccinists.

1st. A simple assertion that vaccination does confer a certain degree of protection against an attack of small-pox would at once be met by a counter assertion that it does not. The question, therefore, will be answered inferentially, and from authors the most trustworthy, though a desire to economize space prevents me from citing them at length.

And first for *England*. In the first thirty years of the last century, when inoculation of small-pox was unknown, the mortality in London from that disease was 7.4, and at the close it was 9.5 per cent, inoculation having been introduced in the interval. A Committee of the Epidemiological Society have compiled tables to show the ratio of mortality from small-pox in London before and since vaccination was introduced, and the following are the results: For the fifty years, from 1750 to 1800, the average number of deaths from small-pox, out of every 1,000 deaths from all causes, was 96 or nearly ten per cent; while during the first half of the present century (the halfcentury *succeeding* the introduction of vaccination) the mortal ty was 39. In the whole of England, according to official returns, the estimated death-rate from small-pox alone at the end of the last century was 3,000 per million, while from the same returns the present death-rate from the same cause is only 200 per million! An analysis of the latter is most interesting. Vaccination has, in Great Britain as elsewhere, had its

opponents, but the practice has become more and more general, (and the opposition to it less and less,) till now it is quite general. What is the result? During the first ten years of the present century, the mortality from small-pox in every thousand deaths from all causes was 64; in the second decade, 42; in the third, 32; in the fourth, 23; and in the fifth decade it was 16. Let the anti-vaccinators explain this as best they may. Not only has the average of deaths from small-pox diminished in the above ratio, but epidemics of the disease have become less frequent. Before vaccination it was as 48; during vaccination it was as 14. The inference from all this is thus drawn by Sir Thomas Watson (the ablest medical writer in London): "Where vaccination is, the contagion of small-pox need never come."

Dr. Robert Thomas, author of the "Practice of Physic," which serves as a text book for students and physicians, after a long and careful analysis of the vaccine question, and giving to every objection the most patient consideration, thus sums up: "the introduction of vaccination, notwithstanding all the abatements which must be made in the estimate of its powers, is still one of the greatest boons that science ever conferred upon mankind. Compare the ravages committed by small pox, before and after this important epoch; and we may in the first place, appeal to general experience in the words of the Report of the National Vaccine Establishment, where the rarity of an example of disfigurement by small pox now to be found in theatres, in churches, or any large assembly of the people, is adduced in proof of the continued protective property of the lymph employed." After a long and laborious analysis of the bills of mortality, and of the observations of Christian of

Liverpool, Percivall of Manchester, Monro, Ceely, Gregory, Thomson, Curtis and others, he says: "if these conclusions, derived as they are from somewhat extensive data, be at all near the truth, they will go far to prove Mr. Curtis's assertion, where he says of vaccination, that its value is much greater than that of any known remedy for any known disease at all comparable to small pox in mischief to the human race.

How is it in *Wales?* Dr. Hughes, of Mold, states: "no child born in the Mold district, and alive at the date of the registration of its birth, has died of small-pox during fourteen years, yet small-pox has prevailed on various occasions all around it."

How is it in *Ireland*, where vaccination has been compulsory for the last fifteen years? The immunity afforded by vaccination there has been such as to induce a wide-spread belief in its efficacy among the people. Vaccination is practiced generally all over that country, and the children of the soil carrying with them an entire confidence in the practice, are always the most willing to be vaccinated. The results are seen in the following figures, from which it appears, says an official document, that the Irish physicians have banished small-pox from their island, as Saint Patrick is said to have banished the snakes. In the periods 1830 40, 1840–50 and 1850–60, before vaccination was general, the respective annual average mortalities had been 5,800, 3,827, and 1,272. In the years 1864, 5, 6, 7, 8, they were 854, 347, 187, 20 and 19, respectively. In the first half of 1869, the whole number was three! The remarkable immunity from small-pox conferred by vaccination, induced a laxity in the practice, and a few cases occurred subsequently to 1869, but they were supposed to have been imported. In Montreal there are comparatively few

children of Irish parentage unvaccinated, and our tables of mortality—to which I beg to refer—show how very few of that nationality die of small-pox.

What is thought in *Scotland* of the protective influence of vaccination? I quote again only our medical teachers—those from whom we are content to receive our medical knowledge. One of the most distinguished medical philosophers that Scotland—and Scotland is prolific in medical philosophers—has produced; and one who graced, for a great number of years, the chair of medecine in the University of Edinburgh, writes thus: "The first question is whether or not we have, at this time, in the matter of cow-pox, a power at our command capable, if duly employed, of depriving the poison of small-pox of all fatal influence over an immense majority of mankind. And on this subject there has been quite sufficient information collected, since the date of the papers which were held decisive of the question fifty years ago, to show that the same inference is still inevitable, and that he who disputes it is equally unreasonable as he who opposes, in like manner, any proposition in Euclid. Of course, when I say there has been ample evidence to decide this question statistically, I mean to refer to cases where we have not only the negative evidence of large numbers of persons duly vaccinated, having been subsequently, most of them repeatedly, or for a long time together, exposed to the contagion of small-pox—*i. e.*, placed in the same circumstances in which unvaccinated people have been generally affected, and many of them died of small-pox; these vaccinated persons have nevertheless escaped, most of them without any indication of disease. To show that this is the light in which I have always regarded such collections of facts, I quote

one sentence from my own lectures, written as long ago as 1820–1821, and repeated almost every winter since then :—" You will remember that the question is, not how many vaccinated persons never take small-pox, but how many vaccinated persons are fully exposed to the contagion of small-pox and escape without any disease ; and our assertion is that, so far as is yet known, absolute protection of the human constitution is the rule, and the occurence of any disease is the exception." Those who, like me, have had the advantage of listening to that most profoundly logical and conscientious medical teacher, well know the care and thought he gave to his every utterance. Dr. Alison has passed away, and what says Dr I. Hughes Bennett, his successor in the professorial chair ? " We have no remedy (for small-pox) but vaccination ! "

Let us now proceed to the Continent, and what do we find ? And first to *France*— ever foremost in all researches having science for their foundation. M. Bousquet, in his *Traité de la Vaccine*, gives most accurate and interesting details of an Epidemic of Small-Pox which visited Marseilles in 1825. The population of Marseilles amounting to 40,000, might be divided into three classes, of which the respective numbers stood thus : 30,000 vaccinated ; 8,000 neither vaccinated nor variolated ; and 2,000 variolated—that is who had the small-pox either naturally or by inoculation. Of the 30,000 vaccinated, about 2,000 were seized with the prevalent small-pox epidemic, of which number 20 died or 1 for every 100 affected. Of the 2,000 variolated, 20 were attacked and 4 died ; or 1 in every five cases. Of the 8,000 non-vaccinated, 4,000 were affected, and of this number 1,000 died or 1 out of every 4 cases. From this it follows

that one-half of the non-vaccinated, 1-15th of the vaccinated and only 1-100th of the variolated took the disease. But such was the difference in the comparative severity of the attack in the vaccinated and variolated, that while the variolated part of the population were cut off in the proportion of 1 out of every 500, the vaccinated part of the population only lost 1 out of every 1500; or in other words, of an equal number of variolated and vaccinated cases, 3 variolated died from the second attack, for every one who died of the disease after vaccination!

Gaultier de Glaubry states—and his statement is confirmed by others—that while, in 1841, small-pox in France carried off more than a seventh of those attacked by it who had not been vaccinated, the mortality was only one in a hundred among those who had contracted the disease after having been vaccinated.

La vaccination peut être pratiquée avec succès, says Bouvier, en toute saison; en tout temps d'épidémie on doit vacciner les enfants le plus tôt possible après leur naissance; les re-vaccinations sont nécessaires pour mettre à l'abri de la petite vérole; elles sont sans danger et particulièrement utiles pendant la durée d'une épidémie quelle que soit l'époque de la précédente inoculation du vaccin.

There are, in every country, men who stand out in bold relief even among their compeers; and high among the ablest medical writers of France, or of the world, is the name of Grisolle—*cette ame à la vieille marque.* There are some so bold,—and I am one of them—as to place his "*Pathologie Interne*," among the greatest productions of genius—a work in which no unstable theories however brilliant—no baseless speculations, however fascinating—find place—a work

which reached its 9th edition in about twice as many years, and which, during that period was, and still is, the standard authority upon a most important department of medicine. M. Grisolle says: "Les recherches de Jenner lui ont assigné une place éminente parmi les plus grands bienfaiteurs de l'humanité. La vaccine a donné lieu en France à des travaux importants. On peut vacciner dans toutes les saisons et à tout âge. On attend généralement que les enfants soient agés de deux ou trois mois pour les inoculer; mais cette pratique, *que rien ne justifie*, n'a aucun avantage; ce retard a été cause que beaucoup ont eu une variole presque toujours mortelle, et qu'on aurait pu leur épargner. J'ai inoculé mes deux filles dès la fin de leur première semaine. C'est ainsi que nous devons agir pour nos enfants, plus exposés sans nul doute que les autres à la contagion médiate. On devrait même inoculer aussitôt après la naissance, si l'on était en temps d'épidémie varioleuse, ou si les individus vivaient dans un milieu infecté; c'est ce que j'ai fait maintes fois à l'hôpital sans aucune espèce d'inconvénient. Il n'y a aucune préparation à faire subir aux sujets qu'on doit vacciner. L'opération de la vaccine est fort simple. Il est certain, en effet, que *la plupart des vaccinés sont définitivement à l'abri d'une atteinte de variole. Il est certain du moins que la vaccine rend la variole bénigne que la mort en est rarement le résultat.*" I have quoted at length from Grissolle; as he may be said to bear the relationship to medicine, in France, that Blackstone does to law in England. In *Copehagen*, the fatality from small-pox is but an eleventh part of what it was before the introduction of vaccination; "in *Sweden* it is a little over one-thirteenth; in *Berlin*, in Prussia, and in large parts

of *Austria*, but a twentieth ; in *Westphalia* but a twenty-fifth ! !" In *Bohemia*, *Moravia*, and *Silesia* it has been reduced from 4,000 in every million of deaths to 200 per million ! Not only is it satisfactorily established that vaccination is an effectual safeguard against small-pox, it is, according to some, more effectual in preventing small-pox than is small-pox itself. This was thoroughly tested in Hanover, where it was found that out of a hundred soldiers re-vaccinated, sixty-two per cent failed altogether in producing a vaccine vesicle ; and twenty-seven per cent were only partly successful. Soldiers who had already had small-pox were operated upon in the same way, and with precisely the same result.

Taking Europe as a whole, the conclusion arrived at by Berard and DeLavit, of Montpelier ; Hodenpyl, of Rotterdam ; and Thompson, of Edinburgh, after a close observation, and especially of the epidemic of small-pox in 1816, 17 and 18, in (1) the vaccinated ; in (2) the variolated ; and in (3) those who had neither been vaccinated nor had small-pox was, according to Dr. Stark, thus : Of those who had neither had cow-pox nor small-pox, one out of every four who were seized with the disease, died ; of those who had small pox naturally, or by inoculation, one of every twenty-five to one in seventy-five died ; while of those who had been vaccinated, and were afterwards seized with small-pox, not more than one in three hundred and thirty cases died ; thus showing the great superiority of vaccination, even to the small-pox itself, in protecting the system from the fatal effects of a second attack.

Such information as I could glean from different sources leads me to the conclusion that an attack of small-pox and vaccination confer the same degree of

immunity from an attack of small-pox ; but that subsequent *fatal* small-pox follows more frequently after small-pox than after vaccination.

How is the practice of vaccination regarded in the *United States?* Gentlemen : it would be an endless matter to quote the opinions of the many medical observers in the adjoining Union, but I shall introduce the substance of everyone's remarks as furnished to the State. Several of the States of the adjoining Republic have their State Board of Health ; and each Board may be considered to reflect the opinion of the medical minds in the State. The State Board of Health for 1871 says :—" No amount of disinfectants can cope with this dire disease. The only way to thoroughly drive it from the United States is by a national law, as in England, requiring every parent to duly register his child after having been duly vaccinated." The experience of Massechusetts is summed up in the report from which I quote : that small-pox has appeared here and there, but where it has appeared sporadically it has always been in places where vaccination had been neglected. The town of Holyoke, in the Connecticut valley, was an illustration. One-fifth of all the deaths from small-pox occuring in the whole State took place there. The people in Holyoke had not been vaccinated as elsewhere. Dr. Geo. Darby, of Boston, Secretary of the State Board of Health, summarises for his Board as follows (and his summary receives the sanction of the Board) ; vaccination " invests the human body with an armour which may hardly be penetrated by this subtle poison." A year later (an epidemic of small-pox having passed over Connecticut) he writes : The present epidemic is of such intensity, that it is quite common for persons who have had small-pox in former years to now have it

again. Such occurrences have been previously rare. Vaccination, whether from the cow or from the human body, "takes" readily ; and re-vaccinations prove abundantly the extraordinary susceptibility to the vaccine disease now prevailing, and *never before existing*. In view of these facts, with which physicians and intelligent persons, of whatever calling, are now familiar, let us thank God for Jenner's great discovery, without which our homes would be desolated, and our peace and happiness destroyed. The imagination can hardly picture the horror which would to day pervade Massachusetts, were the present epidemic unchecked by vaccination." A year later (1874)the epidemic being over, the same authority, and the same Board, report *inter alia* : One year ago * * we were in the midst of an epidemic of small-pox of extraordinary intensity * * * the protective power of vaccine has been proved beyond all question, and the absolute need of *careful vaccination* is equally evident. From September 6th to the close of the year, not a single death from small-pox has been reported to us from the cities or state." I received the last " State Board of Health " report, a few days ago, an interesting document of nearly four hundred pages, and so completely had vaccine done its work that the report contains no allusion to the dreaded disease. Thankful for the immunity afforded, the reporter from whom I quote writes : " Vaccination needs no defence from us. Nothing, however beneficent, can escape the criticism of the times in which we live. But this criticism of vaccination, often passionate and violent, relates chiefly to points which, however interesting they may be, leave the main question unaffected. Let any one read the history of the ravages of small-pox before Jenner's discovery, and compare

it with the mortality of Massachusetts from this cause in the present generation, and ask himself the reason of this change. There can be but one answer. We may speculate about the possibility of the potency of vaccine being exhausted in the human family; we may be surprised to find that people with good vaccine scars sometimes have small-pox; we may dispute as much as we please about the average period when re-vaccination may be considered a prudent safeguard; we may even conjecture (what no man has proved) that other diseases than that of the cow may be communicated by humanized vaccine; we may turn the vaccination question with ingenious skill, so that its many facets shall reflect a multitude of curious lights, and after all we find that we rest in a security against this most horrid pestilence unknown to former generations. The disease is the same now as then, for we see its effect among barbarous tribes; but because Dr. Jenner lived, and made the greatest of all discoveries in preventive medecine, we are almost completely safe." I have quoted from a public document which received the sanction of a learned deliberative body—and the approval of the Government of the State—the most generally intelligent State in the adjoining Union. What says the Ohio Board of Health? "While sister cities of Ohio have been recently afflicted with small-pox, Cleveland has enjoyed an exemption far exceeding that of former years. * * * * Our comparative immunity from this loathsome and terrible disease conclusively demonstrates the preventive power of vaccination, and must impress every thoughtful mind with the munificence of the legacy the immortal Jenner left the human race."

I have purposely quoted at greater length from Continental than from British authorities, because it has been asserted by a certain orator who inveighed against vaccination at public gatherings in this city, that it was an "English remedy, and that Englishmen had a pride in engrafting their "beastly" virus on the Christian children of fair Canada"—an assertion reflecting but little credit upon the head, and less upon the heart of the one who advanced it. But American authority, *quo ad* the vaccine question, cannot be suspected of partiality. I have singled out no individual writer on the subject (I might have quoted a thousand American writers in favour of the practice of vaccination) but have confined myself to State documents containing the deliberate expressions of deliberative bodies, reflecting the condensed thoughts of the best medical minds in the United States. I turn with little pleasure to this my own country, and especially to this my own city, and I find anti-vaccination views advocated, and disseminated by a small but ceaselessly active section of medical and legal thought. I find from personal knowledge a deeply rooted prejudice against what the scientific world generally has sanctioned; and I find disease, disfigurement, and death following in the wake of those teachings; teachings to the dissemination of which a portion of the daily press has lent its columns. I readily admit that small-pox has its periods of dormancy and its periods of activity, and that, every now and then, at irregular intervals, it overspreads a district or country as if epidemic, but why should it press so lightly elsewhere? Dr. Russell, President of the College of Physicians and Surgeons, residing in Quebec, gives the reason:— "We have very little small-pox here. We are all vaccinated." The table prepared by the skilled House

Surgeon of the Marine and Emigrant Hospital, of Quebec, Dr. Catellier, is a crushing and unanswerable argument against the anti-vaccinators. There were 131 cases admitted into the establishment between the months of May, 1874, and July, 1875, and of these the vaccinated numbered 54, *one alone* died. In 69 cases of un-vaccinated patients 32 were discharged cured, but somewhat disfigured, and 37 died. In 8 cases where it was doubtful if vaccination had or had not been performed, 6 were cured and 2 died. These computations afford us the following startling percentages, which every man and woman valuing the healthy future of their progeny ought to carefully note. The death-rate in *vaccinated* cases, is only 1.8 per cent.; in *unvaccinated* 53.6 per cent.: in doubtful cases 25 per cent Can anything tend to expose and confirm the claims of this practice upon the people better than these data? Why does small-pox pass so lightly over Three Rivers? Dr. Badeau, the Doyen of the profession there, explains:—"*On n'a pas de picote ici. On se fait vacciner,*" The same may be said for Toronto. And why does the disease visit Montreal so severely? *We nurse it.* In Quebec, Three-Rivers and Toronto no one writes against, or attacks the principles of vaccination—the only prophylactic for small-pox. That the converse is true in Montreal is evident from the circumstance that the mortality is immensely greater among that nationality whose beautiful language has been made to serve as a vehicle for the dissemination of a most fatal error. Dr. Osler has kindly handed me the records of the Small-pox Department of the General Hospital from Dec. 14, 1873, to July 21, 1875, the period during which it was under the charge of Dr. Simpson and himself. There were admitted during that period 261 cases,

and there were 73 deaths. But how was the death-rate distributed? In the unvaccinated, 58.8 per cent.; in the vaccinated 17.09 per cent.! Dr. Simpson furnished the following additional facts: "All the unvaccinated small-pox patients, except two, had the confluent form i. e. the serious form of the disease. Of the whole number of the vaccinated admitted with small-pox only two had more than two good vaccination marks upon the arm, and only two had been successfully re-vaccinated. These latter two were so sligtly affected by the disease, that except as a precautionary measure, they might have continued to follow their daily occupations." We have now two civic hospitals in Montreal for small-pox; one presided over by the Sisters of Providence; the other by Miss Chambers. What is the experience of these ladies? I give the questions put to the matrons of both establishments, and their answers:— "Have you noticed any difference between the vaccinated and non-vaccinated inmates of the hospital?" Sister Nativity states, in French:—"There is no comparison between the effects of small-pox on the vaccinated and non-vaccinated; the vaccinated, as a rule, are not affected; and when they are they have it slightly; the deaths are among the unvaccinated." Miss Chambers' experience is precisely to the same effect. What more convincing evidence than this, coming, as it does, from sources whose trustworthiness is beyond doubt or question. But the register of the Civic Hospital, (and for the accuracy of which I can vouch) is even more painfully eloquent:

Patients admitted from 7th November 1874 to 1st November 1876, 564.

	Protestant.	Catholic.
Of these were.....	168	396
Of the above, recovered.....	134	269
" died	34	127
	168	396
The deaths among non-vaccinated...	25	89
" with 1 vaccine mark.....	7	32
" " 2 "	2	6
" " 3 or 4 "	0	0
Total,.....	34	127

Of the patients who had three, four or five vaccine marks (and there were many in each institution) *not one* died in either!!

Dr. Larocque obligingly analysed the above for me, and gives the following as the percentage of deaths in the various divisions.

DEATH RATE PER CENT.

PROTESTANTS.

Total received 168, Died 34 or 20–23 per cent.
Unvaccinated " 54, " 25 or 46–29 "
Vaccinated " 114, " 9 or 7–89 "

CATHOLICS.

Total received 396, Died 127 or 32–07 per cent.
Unvaccinated " 165, " 89 or 53–93 "
Vaccinated " 231, " 38 or 16–45 "

IN BOTH HOSPITALS.

Total received 564, Died 161 or 28–54 per cent.
Unvaccinated " 219, " 117 or 53–42 "
Vaccinated " 345, " 47 or 13–62 "

Surely Gentlemen, comment is unnecessary on the above.

I do not quote from the physicians of the city, who, with a very small exception, have again and again expressed, and may yet again express, their entire belief in the prophylactic power of vaccination. Volume after volume has been written to establish the claim of vaccine, and my table, as I write, is covered with documentary evidence, the magnitude of which alone prevents its introduction here. Sufficient, however, has been adduced to warrant an answer to the first question in the affirmative: "that vaccination confers a greater or less degree of protection against small-pox."

2nd. *Are the effects of vaccination permanent?*

As a rule the answer may be: *yes*; but the exceptions are so numerous that I must admit the partial truth of what is claimed by some writers "that the protection which vaccination affords against small-pox is only of limited duration." During what time is there absolute immunity? This varies in different individuals; but I have long been of opinion, and that opinion is shared by those who have given attention to the matter, that the manner in which vaccination has been done in the first instance has much to do with the degree and period of that immunity. Although ten or twelve years are said to be the average period, the thoroughly vaccinated have an immunity of much greater duration. In a large, a very large number, unfortunately, vaccination is not performed with anything like approximate thoroughness.

This has been noticed in the Small-pox Hospital here, where an examination of the arms of the inmates has *rarely* discovered marks of a true Jennerian vesicle. But if there is doubt as to the continued immunity afforded by vaccination, there can be none when it has been *properly* performed a second time. Re-vaccination, when successful, affords *entire* immunity, and in support of this assertion I shall cite but one or two proofs from among a thousand. It has been an imperative rule for the last thirty-five years at the London Small-pox Hospital that every nurse and other servant of the Hospital should, on entering the service, be vaccinated. In their case it is generally re-vaccination ; and it is never afterwards repeated. These nurses live in the closest daily and nightly attendance upon small-pox patients ; and the other servants are constantly exposed to the profuse contagion : yet in no single instance, during these thirty-five years, has any one of these servants and nurses been affected with small-pox. Surely no stronger proof than this can be imagined, that re-vaccination, in the adult, is an absolute protection against small-pox, and need not be repeated. Up to the age of puberty, a child *properly* vaccinated may be considered safe,—but so many of those vaccinated have cicatrices deficient in number, and of a character not strikingly good, that re-vaccination should be resorted to where there is more than usual exposure to small-pox. I have instanced the London Small-pox Hospital as evidence of the advantages of re-vaccination, and shall cite from official sources evidence of the immunity conferred by it on some of the continental armies of Europe. In five years, says Seaton, there occurred in 14,384 re-vaccinated soldiers in Wurtemburg, only *one* instance of varioloid ; and among 30,000 re-vaccinated

persons in civil practice only two cases of varioloid (one of which was probably really a case of chicken-pox), though during these years small-pox had prevailed in 344 localities, producing 1,674 cases of modified or unmodified small-pox among the not re-vaccinated, and in part not vaccinated, population of 363,298 persons, in those places in which it had prevailed. In the Prussian army, since the introduction of systematic re-vaccination in 1834, the cases reported as "varioloid," and still more those called "variola," have been, nearly all of them, among that portion of recruits whose term for re-vaccination had not come, or whose re-vaccination had not been successful, or who were incubating small-pox when they were re-vaccinated. In the 20 years which immediately succeeded the adoption of this system there occurred altogether but forty deaths from small pox in this large army—(or an average of two deaths per annum)–only four of the entire forty being in persons, who, it is said, had been successfully re-vaccinated. So also in the Bavarian army, in which there had been compulsory re-vaccination since 1843, there had not, from that date up to the time of a report made by the Minister of War in 1855, been a single case of unmodified small-pox; and only a very few cases of modified small-pox, without any deaths. While, therefore, I answer the second question in the negative, as to the invariable permanency of primary vaccination, the statistics quoted from official sources, with the almost universal collateral concurrence of medical practitioners, warrant the statement that, after successful re-vaccination, small-pox, even of the most slight or modified kind, is *rarely* met with; and that when the post vaccinal small-pox is met with, of a severe character, it is due to the want of care in the performance of

vaccination in the first instance; or to want of preparedness in the system when primary vaccination had been performed. From what has been said, a question of vast moment to adults necessarily presents itself. As all those who have been vaccinated but once run more or less risk of contracting the disease; and as it is admitted that re-vaccination renews, or adds to, the security against small-pox, common prudence would suggest the course to be pursued by those who wish to guard against this malady.

Grisolle, in advising re-vaccination, says:

La pratique des re-vaccinations est généralement adoptée dans les pays du Nord; elle tend aussi à se répandre en France. On peut invoquer en sa faveur qu'une foule d'épidémies de variole, sévissant chez des vaccinés, se sont tout à coup arrêtées dès qu'on eut soumis à la re-vaccination les individus exposés à la contagion. Ces faits sont désormais acquis à la science. C'est à l'aide de la re-vaccination, appliquée comme méthode générale, qu'on a presque complètement éteint la variole dans les armées Prussienne et Wurtembergeoise." *

Although it forms no part of my present subject, yet, as an impression prevails with some, that persons exposed to small-pox contagion incur additional risk in being vaccinated, and of having one disease engrafted on another, it is well to state that such a view

* Dr. Cuignet recently made the following statement at the Société des Médecins du Département du Nord: "With regard to the influence of revaccination as a preservative against small-pox, I will direct your attention to the quite special condition in which the soldiers of the Guard of Paris are placed in this respect. There is not a corps in the entire army in which revaccinations have been so frequently and so carefully performed; and during seventy years no case of variola has been met with among them, in spite of the epidemics which have on several occasions decimated the populous quarters of Paris."

is entirely erroneous. If vaccination is performed sufficiently early, so that the areola may have time to form, it will prevent small-pox; if later, it will modify that disease. M. March illustrates this rule thus:—"suppose an unvaccinated person to inhale the germ of variola on a Monday, if he be vaccinated as late as on the following Tuesday, the vaccination will be in time to prevent small-pox from being developed. If it be put off till Thursday, the small-pox will appear, but will be modified. If the vaccination be delayed till Friday it will be of no use." Sir John Watson, p- 888, adds :—"Should the person have been formerly vaccinated, re-vaccination will be effectual two days later than this, because in re-vaccinated persons the stage of areola is reached two or three days sooner than in persons vaccinated for the first time.

3rd. *Is there risk of vaccination lighting up local inflammatory action?*

When we consider the disposition, the temperament, the condition of health, of those vaccinated; and the period of life at which vaccination is usually—and the period of the year at which it, is sometimes—performed, it is a matter of surprise that local irritation, or erysipelatous action, is not more frequently lit up. At certain seasons of certain years any abrasure of the skin, however slight even without vaccine lymph, is apt to cause erysipelatous inflammation. What medical man has not sometimes seen erysipelas to follow a slight bruise, or the scratch of a needle or of a thorn? The accidents of this kind following vaccination are very few—not by any means as many as have been seen to follow the pulling of a tooth. Yet who ever advised that an aching tooth should be left alone because it had happened sometime, somewhere, and in the hands

of some one, that hemorrhage from the tooth socket had taken place ; that erysipelas—fatal erysipelas—had sometimes followed ; or that the bones of the jaw had been splintered ? These are accidental ; and so rare are they that they should not enter into one's calculations. So convinced am I of the safety of vaccination, that I have no hesitation in saying that a vaccinator, who knows his business, would vaccinate a thousand children with fewer unpleasant results, than a competent dentist would have in extracting the same number of teeth * There are, 'tis true, precautions to be taken, just as there are common sense precautions to be used by every one in eating, in drinking, in travelling. But these occurrences would be rare indeed if vaccinators exercised care and judgment in the selection of the lymph (which should be pure, taken at the proper time, and without admixture either of decayed epidermis or of pus) and in the selection of their subjects (who should be neither too young, too feeble nor too sickly) ; and with these precautions, severe local inflammation would be rare indeed. But it is not to be expected that some degree of irritation will not be produced. On the contrary, children vaccinated with the purest lymph will manifest, during the few days that the pustules are at the highest development, a certain febrile disturbance of the general system, during which the temperature of the body sometimes reaches 104° F. But

* As this is passing through the press some time after its actual delivery, I have the satisfaction of stating in illustration, that upwards of 6000 children have been vaccinated in this City within the past few weeks by the gentlemen named by the Board of Health ; and that the *alleged* cases of severe irritation following, were only two, in that large number. They were both seen by me and presented nothing unusual—the children being now quite well. Emphlysis coniformis occurred in one house where vaccination had recently been performed, and *all* the children had it ; but vaccination had nothing, whatever, to do with it.

in certain constitutions, and in certain states of the atmosphere, and especially when the crust is decayed and with it there happens to be, either through carelessness or ignorance, decayed epithelium or dried pus or both; or even the purest lymph with an unclean instrument, the constitutional derangement above alluded to, and which was still within the range of health, assumes a morbid character, and more or less severe local or constitutional disturbance is the result. The third question, therefore, may be answered thus: moderate local inflammatory action may sometimes be lit up. but the severer forms are, as a rule, due to want of care in the selection of the crust; to inattention to the age or health of the subject; to carelessness in the use of the sacrificator; or to atmospheric influence; or to all combined.

4th. *Is there risk, when vaccinating, of inoculating the system with scrofula, or other hereditary disease?*— If my answers to the previous questions were necessarily qualified, this one is not, and I emphatically answer: *no.* It would be an utter waste of time to proceed to discuss what has already been disposed of to the satisfaction of every unprejudiced mind. That vaccination induces scrofula, or other new disease, is an absurdity, notwithstanding the wonderful tales of a *Verde de Lisle*, that it has caused mental and physical degeneration of the human species; diminishing men's stature; incapacitating them for the fatigue of military service; or even of the exercise of dancing. One word as to the first: the tallest, strongest and heaviest men in Europe, according to Professor J. D. Forbes, are the Irish; yet Ireland is one of the, if not the, most thoroughly vaccinated countries in the world.

And as to the second, if vaccination induces disease, where are the results of those diseases?

Instead of vaccination inducing scrofula or other hereditary disorder, it is claimed to diminish that tendency. Universal death, it is not denied, is the law of our nature. Though we must all die, yet life may be prolonged in particular instances; and particular instances go to make up the general result. The tables of mortality of a country are the data on which Life Assurance is built It is upon a knowledge of these tables that the premium rate or percentage to be charged in different countries is regulated. Mr. Babbage in his work on Life Assurance, says: "it has been shown by Mr. Davillard, (a french writer) that the introduction of vaccination has *increased* the mean duration of human life by about three years and a half." And the premium rates are influenced accordingly. At the end of the last century the rate of mortality in London was one in every thirty.—One half century later, and the rate of mortality was one in forty-one! Yet during that interval vaccination had been introduced, and the practice had become general. It greatly strengthens, says Thomas, our argument in favour of vaccination, to find that the general mortality, in comparison with which that from small-pox has undergone so marked a diminution, has itself also notably decreased in proportion to the existing population.

In this connection I am happy to be able to cite Dr. Henri Cotin, author of the *Guide Medical*, who says: "On se préoccupe beaucoup dans le monde de l'idée que le vaccin pris sur des enfants malsains peut communiquer la maladie de l'individu. Cette idée est complètement erronée; *jamais aucune maladie n'a été inoculé avec le vaccin*, et ce dernier pris sur l'enfant le plus malingre, pourvu qu'il ait les qualités physiques que nous avons indiquées, est tout aussi bon que celui qui provient du plus bel enfant."

I shall not do more than allude to that absurd paradox advanced by a mathematician, and supported by two or three physicians as paradoxical as him self, that vaccination has transformed small-pox into typhoid fever! and that, in causing the disappearance of the former, it had increased the frequency and virulence of the latter! There may be an excuse for a mathematician—knowing nothing of medicine—to hold such a view; but there can be none for physicians, as it could only be the offspring of profound ignorance of the merest elementary literature of the profession. Every physician should know that typhoid fever is not a recent disease—but that for centuries before the introduction of vaccine it had the same hideousness it has now—and will have so long as sanitary laws are set at defiance.

5th.—Is there risk, when vaccinating, of inoculating with syphilis or other acquired diseases? The allegation has been made by some in the affirmative; but when it is borne in mind the strong temptations to employ false pretexts, it is a matter of surprise that vaccination has not been more generally "pitched upon by persons in search of an apology for their syphilitic children." For my own part, not only have I never seen a case of vaccination of syphilis, but have never met a medical practitioner who had seen a case, either in his own practice or in that of another. We all know how the slightest scratch or cut is apt to develop intractable ulceration in a child having latent syphilis; and how the ulceration thus produced requires the local and constitutional treatment of a syphilitic sore. A slight scratch, required for vacination, may assume a specific character with the purest lymph, when conjugal infidelity, and not the vaccination, is the cause. Sores somewhat resembling syphilitic sores

have occasionally appeared after vaccination, and even in this city have been taken for syphilis. But their early healing without specific treatment, apart from their appearance, forbids the assumption that they were syphilitic sores. These are what are called by Rayer, Auzias Turenne and others *vaccinelle* or *vaccinoïde*, and may arise from: 1st the vaccination of a syphilitic child, or 2nd the vaccination of a child who had already been vaccinated, or who had had small pox or who manifested an inaptitude for the vaccine influence That vaccine lymph does not carry with it the syphilitic virus, even in cases of undoubted syphilis, may be fairly inferred from the experiments which have been performed on a large scale on the continent of Europe, where, in not one of those experiments, has anything like syphilis resulted. The British Public Health Report published by authority of Government, and presented pursuant to act of Parliament is so germane to this part of my subject that I shall quote from it at considerable length. M. Taupin, of the Children's Hospital in Paris, in order to settle such questions as these, had, in a large number of cases, deliberately vaccinated from the arms of children who (while under vaccination) were sick with all other sorts of communicable diseases, including syphilis; but had never, on any occasion, seen any of these affections communicated in his vaccinations: "*dans aucun cas, nous y insistons à dessein, le virus n'a rien communiqué que la vaccine toute seule.*" Dr. Schreier of Ratisbon had similarly, on two occasions, experimented with vaccine lymph from syphilitic children and, like M. Taupin, had got no syphilitic results. Professor Heim of the Wirtemberg military service, had done similar experiments, with similarly negative results. Dr. Heymann had, as seen the habitual

practice in Java, that children having scrofula, syphilis, itch, the endemic frambœsia, and other complaints, were used indifferently with others as sources of vaccine lymph; and that no evidence ever appeared of any of the complaints being so communicated. And to this former negative testimony, from several independent experimenters, I may now add the similar testimony of Professor Bœck of Christiania; testimony which has peculiar value because of Dr. Bœck's very eminent relation to contemporary studies of syphilis. Dr. Bœck reports that, having under his observation two men affected with elephantiasis, two men who had never had syphilis, and whom their elephantiasis of course would not have rendered insusceptible of it, he, on three different occasions far apart, vaccinated these two men from children having well developed hereditary syphilis, that in one of the six vaccinations, five normal vesicles resulted, but in the others, none, nor any other local change; that "these two patients were observed daily during three years, and never presented a single symptom of syphilis."

With well attested experiments like the above standing on record, we are obliged to doubt whether vaccination (*i.e.* genuine and simple inoculation with vaccine lymph) from however syphilitic a subject, can possibly communicate syphilis; or, at the very least whether some stage of the vaccine vesicle more advanced than vaccination rules allow to be proper for lymph supply, or some admixture, which fastidious vaccinators never permit, of blood with the vaccine lymph, must not be a condition for such possibility. That some ignorant quack salver, pretending to vaccinate, but neither knowing the aspects of a vaccine vesicle, nor caring from what sort of body he draws

his supposed lymph, may take as his "healthy source for lymph supply" an infant all maculated or ulcered with syphilitic skin disease, and may from its *spots* or *sores* transfer infective material to some victim of his mis-called vaccination, is of course evident; for syphilis does not cease to be syphilis because noodle or knave calls it vaccinia; but facts of this kind cannot in any reasonable sense be counted against vaccination, any more than we should count it a fact against Quinine that some grocer had dispensed Strychnine in mistake for it. Finally, too, I permit myself this general remark: that, in proportion as any alleged fact contradicts an otherwise universal experience, the individual witness must be regarded as making larger and larger demands on us for belief; and that in matters like the present, where sources of fallacy are so abundant, the witness's accuracy of observation requires to be most thoroughly guaranteed.

Dans le monde, says Grisolle, les parents se préoccupent beaucoup de l'idée que leurs enfants pourraient être vaccinés avec du mauvais vaccin, c'est-à-dire provenant de sujets malsains. Quoiqu'il n'y ait pas plusieurs qualités de vaccin, quoique le virus qu'on retire d'un enfant fort ou faible, d'un individu ayant le syphilis, les scrofules, etc., ait en général la même efficacité, cependant il y a toujours intérêt à prendre du vaccin chez des sujets vigoureux, attendu que, chez les individus faibles, on voit le virus dégénérer promptement ....

Relativement à la syphilis, il est certain aussi que le vaccin fourni par un vérolé *ne peut transmettre que la vaccine lorsqu'il est pur, c'est-à-dire sans mélange de sang:* il n'en est plus de même lorsque la pointe de la lancette qui est chargée du vaccin, est salie par la plus minime quantité de sang.

The cases of supposed inoculation of syphilis with the vaccine virus are not many, and an analysis reduces them to very few—and those few are still further reduced by the fact that the grossest ignorance and misconduct were, in some instances at least, imputed to the vaccinators. The few cases that have been published in the past seventy years, chiefly from Continental sources, are utterly insignificant in numbers and importance, and lead us to ask the same question as Mr. Simon: "if our ordinary current vaccination propagates syphilis, where is the syphilis that it propagates? Who sees it? The experience of the department is an entire blank on the subject. For the last ten years we have been in incessant intimate communication with the different parts of England on details of public vaccination, and during these years, every one of the about 350 vaccination districts into which England is divided has been visited three or four times by an inspector specially charged with the duty of minutely investigating the local practice of vaccination; yet from this systematic and extremely detailed search for all that has to be said on the subject of vaccination in England, no inspector has ever reported any local accusation or suspicion that a vaccinator had communicated syphilis. Again, our national vaccine establishment has been in existence for more than 60 years, vaccinating at its own stations every year several thousands of applicants, and transmitting to other stations supplies of lymph, with which every year very many (at present 50 or 60) other thousands are vaccinated, who in their turn, become sources of vaccination to others; but this vast experience does not, so far as I can ascertain, include knowledge of even one solitary case in which it has been alleged that the lymph has communicated

syphilis. Is it conceivable that these negative experiences could be adduced if the vaccine lymph of children with latent hereditary syphilis were an appreciable danger to the public health? Thirteen years ago it devolved upon me (as medical officer of the Board of Health), to make the widest possible enquiries, both of scores of public departments and institutions, and also of many hundreds of individual practitioners, in our own country and on the continent of Europe, with a view to elicit all existing experience on the validity of objections which had been alleged against vaccination; and on that occasion I, of course, gave great prominence to the point which is here raised. One of the four questions which I circulated was the following:—"Have you any reason to believe that lymph from a true Jennerian vesicle, has ever been a vehicle of syphilitic, scrofulous, or other constitutional affection, to the vaccinated person; or that unintentional inoculation with some other disease, instead of the proposed vaccination, has occurred in the hands of a duly educated medical practitioner?" The answers which I received on this, as on each of my other points, from 542 members of my profession, are, as regards syphilitic inoculation, only just short of being an absolutely uniform "No." The alleged cases (of inoculation) were thrown into real insignificance by their relation to the main body of testimony. Men of the oldest and largest consulting pratice in the United Kingdom; men who were believed to have seen every variety of disease and accident to which the human body is liable; our leaders who had taught medicine and surgery to the mass of the profession; physicians and surgeons of our largest metropolitan and provincial hospitals, in England and Scotland and Ireland; physicians who

specially studied the diseases of infancy ; surgeons who had specially studied the inoculative diseases: pathologists of distinguished insight and learning,—men of all these sorts, scores on scores of them, had never in their experience " had reason to believe or suspect any such occurrence as my question described." In the alphabatical series to which I have referred there may be read all the most eminent British names of thirty years ago, certifying to such negative experiences ; there may be read, too, that equally negative in Paris had been the vast experience of Chomel and Moreau, Rayer and Ricord, and Rostan and Velpeau ; equally negative at Vienna that of Hebra and Oppolzer, and Sigmund. And in here recurring to that very remarkable mass of testimony. I may repeat the remark which my former review of it suggested to me : " Obviously one at least of two conclusions is inevitable ; either it is that with reprehensible carelessness as to the source of lymph, vaccination (so long as in any sense of the word it is vaccination) cannot be the means of communicating any second infection ; or else it is the case that in the world of vaccinators care is almost universally taken to exclude that possibility of danger. To the public, perhaps, it matters little which of these conclusions is true. Though it would be the merest idleness to take again, now, the sort of formal census of medical opinion which I took thirteen years ago, I may state that ever since that time I have felt it among my strictest duties to be generally watchful and interrogative on the present subject ; all the more so as the period has been one of extraordinary pathological progress, and especially has brought to light very important new knowledge concerning syphilis ; and I have every reason to believe that a

present census of personal experience in this country would give just the same practical results as those which accrued from the former enquiry. Indeed, in a few very important directions I am satisfied myself that it does so. I may mention, for instance, that the Army Medical Department has, during the last eleven years, had cognizance of 151, 316 (adult) vaccinations and re-vaccinations performed on the soldiers and recruits of Her Majesty's service, where, from the nature of the case, the subjects of the proceedings are persons who afterwards permanently remain under medical observation, and in whom, therefore, no syphilitic consequences of vaccination could possibly escape notice ; where, moreover, the chances of latent constitutional syphilis in subjects furnishing the lymph must be about the same as among our civil population, but in all this vast and critical experience, so far as is known to Dr. Balfour (the eminent and laborious reporter on the diseases of the British army) *no single case has ever been alleged of a soldier syphilized by vaccination !* Indisputable certainties, which any one can verify for himself, are :—first, that year by year millions of vaccinations are performed in Europe with scarcely a solitary accusation transpiring that syphilis has been communicated by any of them; and, secondly, that physicians and surgeons who could not fail to see such cases in abundance, if such abundance were a reality, concur with almost absolute uniformity, hundreds of them together, in declaring that they had "never in their experience seen even a single case of the kind." Surely for every practical purpose, certainties like these are our best guides ; and with such certainties in our knowledge it would be the merest pedantry to insist on infinitesimal speculative uncertainties."

One terse observation from the Board of Health of Ohio, and I have done ; " *When properly vaccinated* by an intelligent physician, no disease could be produced by inoculation other than vaccinia, the one to be desired."

It may be some satisfaction to the learned and laborious writers, from whom I have quoted above, to learn that their views are fully coincided in by most of the leading minds of the profession in Montreal. On Friday, of last week, I submitted the following questions to the members of the Medico-Chirurgical Society of this city. Doctors are said to differ, but the unanimity of view on the following was most noteworthy. The meeting was an unusually large one, called for another purpose, and the secretary (Dr. Bell) has kindly furnished me with the accompanying extract from the minutes, with the permission of the Society for its publication :

Meeting of the Medico-Chirurgical Society of Montreal, on the 13th October, 1876.

Twenty three members present.

Moved by Dr. HINGSTON, seconded by Dr. R. P. HOWARD.—1st. That vaccination confers a certain degree of immunity from small-pox, by either preventing or modifying that disease.

2nd.—That such immunity is not always permanent, but may be rendered so by re-vaccination.

3rd.—That vaccination may produce, in some instances, a certain degree of inflammatory action, which may be modified, increased, or diminished, by the age, constitution or condition of the patient, or by the state of the atmosphere.

4th.—That vaccination does not, in any instance, produce scrofula or other hereditary disease.

5th.—That neither the evidence hitherto furnished to, nor the experience of, the members of this Society, is of a character to lead to the conclusion that syphilis is ever inoculated with vaccine lymph.

Carried unanimously.

In concluding I may add: As it will be somewhat difficult for you to obtain a sufficient supply of lymph to *continue* your vaccinations, owing to the circumstance that many mothers, while solicitous regarding the physical condition of the child who has the honour of furnishing vaccine lymph to *their* children, refuse, in turn, to render the same service to others, under a pretext that it disturbs or fatigues their precious offspring. Explain to such mothers, please, that they do an act of injustice; that as they received immunity on the one hand, they are obliged, in justice, to dispense it on the other; that had other mothers acted as selfishly, the supply could not have been kept up for *their* advantage. Some mothers refuse, under the belief that puncturing a vaccine vesicle, and receiving a portion of its contents, will diminish the protective influence intended to be gained by the vaccination in the first instance. But this is an error, and should not be permitted as an excuse to those who are slow to do for others what has been done for them. A mother should never hesitate to permit her child to be the source of safety to other children, not less dear to their mothers. You can assure them moreover, with confidence: that the removal of a portion, or even of the whole—(which is never done—see Clause 7 of *Instructions*) of a vaccine vesicle, in no way impairs the protective influence, or produces any, even the slightest inconvenience or suffering

Gentlemen: I have detained you much longer than I intended, and beg to thank you, and my many medical friends and fellow citizens who have honoured me with their presence this afternoon, for their and your most patient attention.

APPENDIX.

Since the foregoing was delivered, many of my medical friends, some not members of the Medico-Chirurgical Society of Montreal, and some not present at the meeting in question, expressed a desire to have an opportunity afforded them of recording their opinion on the questions submitted to, and unanimously adopted by that Society on the 13th October last, and referred to on page 42. I willingly acceded to their request, and have been furnished with the following list, not at all complete, I am informed, of medical gentlemen practising in this City supporting those resolutions. Their names are published *in extenso*, as it has been industriously circulated that those who practice vaccination are unsustained by medical opinion here. The reader will perceive the remarkable unanimity of thought, as expressed by the very large number, on a matter of such vital moment; and will recognize among that number our most distinguished physicians—French and English; nearly all the physicians at our hospitals; nearly all the physicians at our dispensaries; nearly all the professors in our medical schools and colleges; nearly all our oldest and ablest men in private practice, with a life long experience to appeal to, and without motive to mislead; nearly all our middle aged practitioners engaged in large and lucrative practice; nearly all our young men fresh from their studies, and familiar with the most advanced views of trans-atlantic medical minds—some of them just returned from Europe where they have had opportunities of learning the thoughts and opinions of the most eminent in our

profession there; not, perhaps, the views of such men as might well be astonished to find themselves quoted as authorities three thousand miles away. I thank my medical friends for their readiness in expressing their opinion on this important question; and much doubt if there is any other topic or point in controversy on medicine, surgery or pathology upon which so unanimous an expression of medical thought could be obtained in this city. In matters of *law*, judges differ; but the decision of the majority is, after all, the decision of the court, and litigants must abide by it. Respect for a majority, so well pronounced, of competent *medical* judges will, in this instance, I hope —considering the contingency in events —lead to a cessation of those ill timed attempts to interfere with the efforts that are now being made to check a loathsome disease by the only prophylactic which science has yet discovered

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Pronunciamento of Physicians of Montreal, in favour of Vaccination.

G. M. Abbott,	M.D.	S. Lachapelle,	M.D.
T. J. Alloway,	"	L. Laberge,	"
P. A. Allard,	"	Jos. Leduc,	"
G. Archambault,	"	B. H. Leblanc,	"
P. Beaubien,	"	A. Lamarche,	"
J. Bell,	"	H. Lemery,	"
F. Barnes,	"	J. A. A. Léonard,	"
D. Baynes,	"	J. L. Leprohon,	"
G. A. Baynes,	"	D. C. MacCallum,	"
J. E. Berthelot,	"	A. C. Macdonnell,	"
J. G. Bibaud,	"	W. Macdonald,	"
A. Bondy,	"	D. McCallum,	"

R. Brodeur,	M.D.	J. H. A. Matte,	M.D.
F. Buller,	"	L. J. A. McMillan,	"
G. O. Beaudry,	"	W. H. Mondelet,	"
W. E. Bessey,	"	E. P. Mount,	"
A. A. Browne,	"	F. Müller,	"
G. A. S. Brunelle,	"	R. L. Macdonnell,	"
E. J. Bourque,	"	J. B. McConnell,	"
W. H. Burland,	"	G. W. Major,	"
W. B. Burland,	"	A. W. Marston,	"
G. W. Campbell,	"	A. Mathieu,	"
F. W. Campbell,	"	G. H. Merrill,	"
P. F. Casgrain,	"	H. Merrill,	"
J. C. Cameron,	"	A. Meunier,	"
R. Craik,	"	P. B. Mignault,	"
A. Chamberland,	"	W. A. Molson,	"
J. D. Cline,	"	C. J. Morse,	"
J. O. Coutu,	"	J. W. Mount,	"
A. H. David,	"	W. Nelson,	"
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